



United States
Department of
Agriculture

Forest Service

Rocky Mountain
Research Station

**Research Paper
RMRS-RP-25**

June 2000



Building Consensus:



Legitimate Hope or Seductive Paradox?

Stephen F. McCool, Kathleen Guthrie, and Jane Kapler Smith

Abstract

To understand how participants in a natural resource planning situation described the nature of consensus, we interviewed scientists, agency planners and managers, and public representatives in two planning processes on the Bitterroot National Forest in west-central Montana. While most interviewees felt the agency had included affected interests and felt that the problem could be resolved through public participation, disagreements about the problem definition occurred. Most could "live with" the decision of the agency, but some could not. People varied in their capacity to assimilate the information presented at public meetings. Interviewees varied in their interpretation of whether a consensus was arrived at in the two public involvement processes investigated, but most agreed that it was an essential step in planning.

Keywords: Ecosystem management, human dimension, consensus, public involvement, public participation

The Authors

Stephen F. McCool is Professor, School of Forestry, The University of Montana, Missoula, Montana. His research interests focus primarily on people-environment interactions, with particular emphasis on natural resource planning concepts such as public participation, sustainability, and process applied to protected areas. He received his Ph.D. from the University of Minnesota.

Kathleen Guthrie completed the field work for this research as a graduate research assistant, School of Forestry, The University of Montana, Missoula, Montana. She is currently a planner for local government in Nevada. She holds an M.S. degree in Resource Conservation from The University of Montana.

Jane Kapler Smith is an ecologist at the Fire Sciences Laboratory, U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Missoula, Montana. She develops and assesses methods for providing technical information about wildland fire to managers and the public. She holds an M.S. degree in Forest Ecology from Colorado State University, Fort Collins, CO. During the course of this research she served as Chair of the Human Dimensions Research Group for the Bitterroot Ecosystem Management Research Project.

You may order additional copies of this publication by sending your mailing information in label form through one of the following media. Please send the publication title and number.

Telephone (970) 498-1392

E-mail rschneider@fs.fed.us

FAX (970) 498-1396

Mailing Address Publications Distribution
Rocky Mountain Research Station
240 West Prospect Road
Fort Collins, CO 80526-2098

Building Consensus: Legitimate Hope or Seductive Paradox?

Stephen F. McCool, Kathleen Guthrie, and Jane Kapler Smith

Contents

Introduction	1
The Concept of Consensus	2
Study Area and Methods	4
Results	5
The Problem Definition Is Shared	5
The Problem Can Be Resolved Through Public Involvement	6
The Process Includes Affected Interests	7
Participants Can Accept or “Live With” Results	8
Knowledge Is Distributed Equally Among Participants	9
The Agency Is Given Permission to Act	10
Discussion	11
Literature Cited	14

Acknowledgments

This study could not have been completed without the assistance of numerous individuals. Clint Carlson agreed to fund this examination of public participation in natural resource decision-making as part of the Bitterroot Ecosystem Management Research Project. Greg Jones supported project completion and publication of results. Dale Blahna, Jim Burchfield, Wayne Freimund, Matthew McKinney, Kerry McMenus, and Bruce Shindler provided helpful reviews of manuscript drafts. The project could not have been completed if members of the public, scientists, and agency planners and managers had not consented to interviews. To them, we are grateful for time, insights, and commitment to improving our understanding of public participation.

This research was supported in part by funds provided by the U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station.

Introduction

In the social settings that typify natural resource planning, interest groups compete for scarce resources. This produces conflict because the goals one group pursues can interfere with those of other groups—a situation that can lead to paralysis instead of action. While public land managing agencies hold the legal authority to conduct planning—and are often mandated to do so—interest groups outside the agencies struggle for (and may retain) the political authority to implement plans. Plans that do not meet interest group expectations can be effectively “vetoed” in the political marketplace. Planners become frustrated because they perceive political interests and personal philosophies gaining the upper hand over what they believe is rational resource allocation. The public is frustrated because problems go unresolved and scarce public funds are allocated to bureaucratic processes that ensure procedural compliance over substantive change.

These concerns have led many theorists to propose approaches to planning that serve as alternatives to the traditional rational-comprehensive process that characterizes most planning today. Rational-comprehensive planning is generally constructed upon the engineering-based model of planning criticized by Friedmann (1993). In the 1980s, for example, national forest planning often used a linear programming approach called FORPLAN to allocate lands and schedule timber harvests. While FORPLAN defined timber values and allocated lands to timber production, nonmarket values were often specified incorrectly and thus misallocated. FORPLAN and similar modeling approaches may be useful in situations where (1) there is broad agreement on goals of natural resource planning and (2) scientists agree on cause-effect relationships (Thompson and Tuden 1987). However, managers of wildland natural resource settings—which provide multiple benefits for varying interests—are often caught in situations where neither condition exists.

This predicament occurs for two fundamental reasons. First, the goods and services demanded from publicly administered wildlands have expanded over the last decade to include more nonmarket, amenity, and biodiversity values (Gale 1991). For example, as the West’s population has become more ethnically diverse, demand for non-

traditional forest products such as mushrooms and decorative plants has accelerated. These demands may require a forest character different from that needed for timber harvesting, thus clashing with commercial interests. Second, an ecosystem perspective has increasingly governed wildland management. Ecosystem-based management focuses on long-term sustainability and “landscape scale” analyses, temporal and spatial scales significantly larger than those used for classical production forestry (see Grumbine 1994 for discussion). As temporal and spatial scales have enlarged, information needs have grown. The need for information has grown faster than scientists can obtain the required knowledge or produce predictions with traditional levels of confidence. Thus, uncertainty about effects of actions has increased, resulting in conflicts among scientists about consequences of proposed actions.

Planning situations contextualized by disagreement about goals and beliefs about cause-effect relationships may be termed “messes,” adapting the terminology proposed by Ackoff (1974). Messes are systems of interrelated problems that include both the problem of selecting an appropriate future condition and the challenge of developing alternatives to achieve that condition. In “messy” situations, expert-driven rational comprehensive planning may actually exacerbate conflict because it does little to enhance opportunities for contesting groups, planners, and scientists to engage in the learning needed to identify, examine, and negotiate desired futures. Planners have increasingly recognized failures of rational comprehensive planning and have called for planning based on processes designed to seek consensus among conflicting groups. Several popular and technical works (for example, Crowfoot and Wondelluck 1990, Fisher and Ury 1981, Innes 1996, Susskind and Cruikshank 1987) have emphasized negotiation skills, alternative dispute resolution techniques, and consensus building processes as alternatives to rational-comprehensive planning.

Consensus building is only one goal of alternatives to rational-comprehensive planning. Collecting social preference information, building relationships, mutual learning, resolving disputes, and creating ownership may all be important and legitimate objectives in addition to building consensus. Consensus building could be viewed as complementary to rational-comprehensive approaches to public participation (McKinney 1998). However, we think that consensus building is embedded in

successful public participation in the messy situations that confront many natural resource managers because action in society requires a variety of actors who are acting in concert (Friedmann 1973). Furthermore, the search for consensus may have important positive benefits, such as increasing opportunities for dialogue, learning, and jointly sponsored implementation of programs.

Attempts to build consensus in contentious settings may be based on a legitimate hope that complex public policy questions can be resolved at the local level with citizens, planners, and scientists cooperating in a public-spirited manner. Public participation programs involving federal agencies, however, are repeatedly confronted with numerous complex institutional and social barriers; building consensus requires that these barriers be overcome when attempting to organize citizens into the constructive sessions required (Selin and others 1997). Natural resource planners may be seduced into believing that all that is needed to get plans implemented is to establish a "consensus group." While many such groups work well, others do not, yielding increased frustration for planners who may already be concerned about the relative value and cost of public participation.

If consensus is a goal of public participation, then all participants need a common understanding of the concept. However, few examinations of consensus building processes have been reported in the planning literature. In this paper, we explore the process using a case study involving planning for federally managed natural resources located in the Bitterroot National Forest, west-central Montana. Our purpose is to map the components needed to achieve consensus in a situation typical of those faced by federal natural resource planners. Our objective has not been to prepare a handbook on consensus building, but to report how one group of managers, scientists, and members of the public viewed the concept of consensus and the process of seeking it in a planning situation that represents the situations with which natural resource managers are often confronted.

The Concept of Consensus

Consensus is a term frequently used in situations where there is conflict over social or environmental policy. It brings to mind the idea of working things out or resolving disputes through voluntary

sociopolitical mechanisms. Webster's dictionary (Guralink 1974) defines it as "an opinion held by all or most" or "general agreement." In practice, consensus remains a vague term. Innes (1996) views consensus as "a way to address complex controversial public issues where multiple interests are at stake" but fails to specifically identify the meaning of the term. Nagel (1995), speaking in a political party context, defines consensus as a "public policy that is capable of achieving both conservative and liberal goals simultaneously." Achieving goals is conducted through interaction, negotiation, and compromise. Forstner and Bales (1992) warned against seeking consensus and differentiated it from compromise, although they did not explicitly define consensus. Nagel (1995) reinforced this notion when he stated "win-win policies should be distinguished from compromises, where both sides retreat partially from achieving their goals in order to obtain an agreement." Consensus defined as "no one blocks an agreement" or as "unanimous agreement" places a heavy burden on the public participation process, in that it would require unanimous agreement, something difficult to achieve when discussing complex and controversial resource management topics. While unanimous agreement may be desirable, the variety of competing interests operating in any given situation may render such a goal unrealistic.

As McKinney (1998) notes, consensus building requires those affected by decisions to work together toward common understanding, but a consensus building process may not lead to a consensus outcome. Within a natural resource context, Crowfoot and Wondelluck (1990) use the term "environmental dispute settlement" to mean the same as consensus building and use three characteristics to define it:

1. voluntary participation by the parties involved in the dispute;
2. direct, "face to face" interaction among the representatives of these parties; and
3. mutual agreement by the parties on the process to be used and any settlement that may emerge.

Susskind and Cruikshank (1987) describe three similar components of consensus but go on to say that approaches to consensus building are both "deceptively simple and extraordinarily complex."

While meeting the first two of Crowfoot and Wondelluck's (1990) characteristics is relatively easy, additional exploration of the conditions

needed to create “mutual agreements” (the third characteristic) is required. We propose that consensus-building processes meet six additional conditions.

First, parties to the conflict must agree on the definition of the problem (Carpenter and Kennedy 1985, Potapchuk 1991). Common understanding, shared goals, and similar definitions of problems lie at the heart of consensus, for resolutions to problems require that participants be addressing the same topic. While parties to a conflict may agree that a problem exists, disagreement on what the problem is may be a fundamental obstacle. For example, proponents of snowmobiling in Yellowstone National Park may define the problem in terms of rights of access to a public resource or equity in economic opportunity, while opponents may define the problem as impact on wildlife or interference with their pursuit of a quiet, serene experience. The differing definitions are important because they constrain the discourse and filter the messages actually received by conflicting groups.

Second, there must be agreement that it is appropriate to involve the public in decision-making. The dominance of science in the ecosystem management paradigm may challenge this condition. Federal legislation (for example, the National Environmental Policy Act) requires that the public be given opportunity to identify issues and respond to draft alternatives, but this level of public involvement is low on Arnstein’s (1969) ladder of citizen participation; public participation may have several objectives, only one of which involves collection of social preference data. The level and type of public participation indicates the willingness of public agencies to engage citizens at different levels and at different points in the planning process (Conner 1988, Potapchuk 1991). Consensus building requires that participants agree to jointly pursue a problem, and that seeking its resolution in a public venue is within the domain of public participation.

Third, a consensus building process must include affected interests (Potapchuk 1991). Consensus building processes that exclude legitimate affected interests and values are fraudulent, will lead to increased distrust—particularly about “hidden agendas”—and create additional conflict. This condition ensures that the values and interests of the public are represented in the consensus building process. Consensus may require redundant horizontal linkages within a community; in the case of federally managed resources, it may also demand vertical linkages to national organizations.

National environmental organizations express concern that public participation for federally administered natural resources, particularly at the local level, puts ecological values at risk (McCloskey 1996). In a recent California public land management conflict, for example, the local and national Audubon Society offices disagreed over who could best represent the public interest in managing national forest lands. The senior vice president of the Audubon Society stated that a Senate bill to implement the local chapter’s suggestions

“would allow a relatively small group of citizens to dictate public forest management, rather than agency officials receiving input from the public at large. Forest Service employees often make poor decisions and may not process the public input in a manner we approve of, but they are more likely on the whole to act in the public’s best interest than local management coalitions”

(Beard 1997). So while stakeholders may agree that an issue can be dealt with effectively using public involvement, there may be dissension on how the public will be represented.

Fourth, participants must be willing to “go along” with at least some policies that one group accepts but another dislikes. This means that groups must be willing to accept some compromise; it does not mean that all participating groups unanimously agree. Consensus building processes emphasize cooperation over competition (Avery and others 1981). McKinney (1998) argues that consensus building is about creating value among participants, leading to a situation where participants may “trade” things they value differently. This trading process is at the heart of the notion of willingness to go along. However, compromise is only possible when at least some goals are held in common. Participants in consensus building must recognize that members hold similar values or purposes upon which discussion may proceed. Resolution through negotiation is not possible when solutions come totally at the expense of one group or another. To achieve consensus, each group must be willing to accept at least some choices that they consider less than optimum.

Fifth, participants must be able to engage other participants, including land managers, on equal footing. This means that all participants have access to the same information, policies, and decision-makers (Potapchuk 1991). Access to knowledge is an important element influencing planning (Forester 1989). Typically, planners and scientists

are viewed as the holders of specialized technical knowledge critical to defining and resolving the problem (Friedmann 1987). Increases in knowledge may lead to changes in beliefs about natural resource issues. Land management agencies often believe that through education, the public will come to the same conclusion that specialists hold about appropriate management directions. Imbalances in the amounts and types of knowledge held by the agency and the public may also be a source of distortion during the planning discourse (Forester 1989). Mutual agreements can come about only when all groups have access to the same information.

Sixth, there must be permission to act; that is, the agency proposing land management action must have the consent of those governed. This means that a problem defined by the agency is recognized by those affected as legitimate and one that must be resolved. This is often a problem in situations where agencies are in conflict with their clients or stakeholders. Stakeholders may not be convinced that a problem exists, may feel that a particular agency is not the appropriate one for resolving the problem, or may exhibit belief systems incompatible with the range of proposed resolutions. Permission to act is based on beliefs about both the agency's credibility and its capacity to carry out planned actions. All too often, agencies—particularly at the federal level—have lost the public's trust in their credibility and capability (Thomas 1998).

In summary, elements of mutual agreements include:

1. a common definition of the problem;
2. agreement that the problem can be resolved through public participation;
3. inclusiveness of affected interests;
4. a general, though not necessarily unanimous, agreement on the proposed action— that is, willingness to “go along” with the decision;
5. an equal amount of knowledge among participants about the action, alternatives, and consequences; and
6. permission to the agency to initiate actions.

Other factors, such as facilitation, leadership, and organization, may be important for successful public participation (Shindler and Neburka 1997).

However, consensus building may take place without these factors and cannot occur if the above six conditions are unmet.

Consensus building is based upon collaborative learning processes, where an understanding of multiple interests joins a basic scientific understanding of relevant conditions (Walker and Daniels 1996). In ecosystem-based management, the importance of human concerns and integration of scientific, anecdotal, and procedural knowledge in developing management actions have been well established in the literature (for example, Moote and others 1994). Several authors have argued that such planning requires participation of planners/managers, scientists, and the public (Kusel and others 1997, McCool and Ashor 1984). Agency managers and planners bring to the collaborative setting the mandate for planning as well as certain technical and procedural expertise. Scientists contribute specialized knowledge about ecological or sociological processes and conditions, effects of management actions, and the presence of unique or valuable species. Members of the public demand that socially important questions be addressed, force higher quality research, and provide emotional, anecdotal, and political knowledge that defines the acceptable decision space.

Study Area and Methods

Two relatively small, adjacent, and procedurally linked planning projects in the Bitterroot Valley of western Montana served as the setting for examining the concept of consensus. Both projects were conducted by the Stevensville District of the Bitterroot National Forest and designed to address ecosystem-based management issues at a landscape scale. The projects—Stevensville Southwest (SSW) and Stevensville Westcentral (SWC)—were conducted sequentially and provided opportunities to examine how participants in a public involvement process felt about the required elements of consensus. The two projects involved about 40 meetings with members of the public. Additional formats used included small group processes, field trips, and presentations from participating scientists. The two projects were directed toward developing management actions for a variety of forest uses, including timber, grazing, watershed, recreation, and wildlife. The projects were conducted from 1992 to 1996. Formal environmental analyses on both have been approved, following unsuccessful administrative appeals by various interests.

Both projects were about 40,000 acres in size and similar in scope of issues. Both followed guidelines for preparation of environmental assessments under the National Environmental Policy Act (NEPA) in accordance with Forest Service procedures. Both were based on the concept of “ecosystem management,” a paradigm of natural resources management that emphasizes sustainability and decisions at a “landscape” scale. Ecosystem-based management is rooted in science, suggests that management “mimic” natural processes, and stresses multiple outputs of management rather than a single, commodity purpose. Ecosystem-based management underscores long-term sustainability of interacting social and biophysical systems.

In an attempt to reach consensus about management direction, the SWC Project had more public meetings than the earlier SSW Project. In addition, a focused scientific effort was initiated by the Forest Service Intermountain Research Station (now the Rocky Mountain Research Station) to create a larger information base upon which to make decisions. Scientists from The University of Montana also participated. Scientific participation included presentations by scientists to both federal managers and members of the public to increase awareness of important ecosystem processes and functions in the planning area.

During the SWC Project, the second author assumed a participant-observer research strategy. After the environmental assessment was released, the second author interviewed all scientific and managerial participants in the SWC process to explore the concept of consensus. About half the public participants were also interviewed. Public participants, which included a typically wide range of beliefs and political positions about natural resources management, were sampled to achieve representative perspectives on the project. About five participants were unavailable for an interview; only one declined. Interviews were conducted in the summer and fall of 1996, with six followup interviews conducted in the summer of 1997.

Forty individuals were interviewed for this study. About 10 represented Forest Service planning and management personnel and about 10 were scientists, employed by the Forest Service or The University of Montana. The 20 public interviewees represented ranching, community, resource commodity, recreation activity, and environmental interests, although many could not be categorized into just one class. All interviews were conducted on a confidential basis. Interviewees

were asked what consensus meant to them and if they perceived a consensus in the SWC process. The followup interviews were specifically designed to more completely determine what elements of consensus were perceived to be present by key participants in the project. Each interview was taped with the permission of the individual and was later transcribed. Transcribed interviews were searched for key concepts related to consensus.

Results

The results of the study are reported according to the six major components of consensus identified earlier. In addition, we provide a summary section concerning perceptions of consensus. Quotations from interviews are used to demonstrate agreement or disagreement with the component and to provide additional contextualizing information. The exact language is used in the italicized quotation, with the exception that “ums” and “uhs” and other grammatical faults of spoken English have been removed. Where necessary, clarifying language has been inserted and enclosed in brackets. Where possible, quotations from scientist, agency planner/manager, and public participants are included to show similarities or differences in viewpoints regarding each component.

The Problem Definition Is Shared

An underlying element of the consensus concept is the notion of agreement not only on a resolution to the problem, but on the definition of the problem itself. The formalized problem statement from the Forest Service was defined as ensuring “the capability to sustain biological diversity at the landscape, community, and species levels through competent ecosystem stewardship” (U.S. Department of Agriculture 1996). Participants differed in their opinions about whether an agreement on the problem existed. Public representatives felt that the reason for participation was that

“they [the participating public] have some sort of concern for what sort of management was going to be going on in their national forest.”

One member of the public noted, in response to a question about agreement on the problem,

"to a degree, yes, but there wasn't a 100 percent conversion. There was a little bit of doubt. People didn't necessarily buy the idea of EM [ecosystem management] because they felt that the Forest Service didn't know 'siccumb' about what they were doing anyhow."

A third public representative, indicating uncertainty about agreement on the problem, stated,

"Well, if the indication that we met for, how many years, is an indication of our agreement [on the problem], then I'd say we didn't agree on what the problem was."

One of the managers summarized the difficulties in coming to agreement on a problem definition by stating with reference to a particular public interest group that

"... in their eyes, the problem was to stop us from cutting trees maybe, protecting roadless areas. Yeah, I think everyone perceived the problem completely different—maybe that's the problem. We saw it different than they saw it and people coming to get educated, maybe they didn't see a problem because they were just coming to learn."

A participating scientist observed:

"The public were [sic] coming because the Forest Service had stated that they were going to develop a plan of action for SWC and they wanted to have public input on that—that was part of it."

But reasons for participating and definitions varied significantly:

"I think the people were coming for a number of reasons—some people wanted to find out what the Forest Service actually meant by EM, other people were coming because they anticipated some kind of manipulative change on the forest and they wanted to know what it was going to be and be able to voice their opinion, pro or con. I don't think many people were coming just to become more enlightened about EM per se; I think they were concerned about how the Forest Service was defining it and what then they were going to do with it—how they were going to take this EM thing, a definition and how they were going to apply it to some kind of action on the ground."

One respondent felt that the reason people showed up at meetings wasn't so much to help resolve a problem but rather to ensure that interests were represented:

"Some people were there to in a way maintain their group's presence and maybe they looked at

it in the longer term like we did, but I think also that there were a lot of people there just for their own individual reasons—because they were interested in the area, they lived right there. Anytime the ranger is proposing a variety of things for an area that people live by, then you know, they become pretty interested. People weren't only drawn [into the process] because it was in their backyard, but also because it was part of their viewshed."

Thus, while the Forest Service was developing a plan for sustaining biological diversity, members of the public tended to define the problem or goals as what the agency intended to do on the land without respect to a particular management ideology. Some public participants were motivated by a desire to help resolve an ecosystem-based management problem but others participated in order to protect an interest or out of suspicion about other groups and their motivations. Misgivings about what actions the Forest Service would pursue rather than seeking a consensus on proposed actions seemed to typify the motivations for public participation. Scientists were involved primarily to provide information, while agency planners participated to meet national forest planning goals.

The Problem Can Be Resolved Through Public Involvement

To create consensus, participants must agree that the problem can be resolved through public participation. This condition is critical, because some, particularly scientists and managers, may hold beliefs that only expert or scientific knowledge is necessary for the planning process. Ecosystem-based management has largely been defined as a scientific process, with the public more or less on the outside looking in and playing a role only marginally different from that in the formal public participation requirements of NEPA. Respondents in this study, however, felt that public participation was an essential, if not the sole, component of the planning process. In response to a question about the ability of the problem to be resolved through public participation, one public participant observed,

"Not by itself perhaps, but it [public involvement] is part of the process that is very necessary to resolving it. ... In a sense [the SWC Planning Unit] was good because it wasn't the case of the Forest Service saying to the public, 'Hey, we know

this is right and this is the way we are going to do [it] and we want you to know it.' In that sense, it [SWC Planning Unit] was a change in how they approached the public about forest management."

A manager noted that there were other benefits to public participation in addition to resolving the problem:

"I think there is [sic] a lot of paybacks in terms of, you know, hopefully in the long term of getting some sort of public trust and that is something we lack here in the Valley. That is our long term goal—to get people to essentially trust us and be willing to let us do something out on the ground."

However, several respondents noted limitations on public participation, recognizing that technical aspects of ecosystem-based management were important and that public understanding of those aspects was critical. One member of the public, for example, stated:

"So, another thing that is really necessary to be effectively involved in a management plan is to understand all the technical aspects of it too. There has to be some place for the public to be involved, but I'm not sure if the technical part of it is where you involve the public."

Learning, however, goes beyond the technical aspects of the problem and includes learning about each other, a value that is critical to the dialogue needed in a public involvement program:

"If you can identify them [issues], at least you have the possibility of getting people to talk to each other about the agreements or differences. That's definitely the first big step in developing a management plan that all people will buy into to one extent or another."

A manager observed that a limitation on public participation is who comes to be involved in the process:

"It's probably not the best [way to address the 'problem'] because you only manage to get the involvement of people that have an agenda or feel passionately about things, and although you definitely should be listening to them, there are a whole bunch of people out there that have just as much of a say, but they may not feel as passionately or strongly. I think they are just as important—it's their land too."

The concept of ecosystem management is presently evolving with scientific methods that are

unfolding as well, and this was a limitation to the process for all participating groups, as a scientist observed:

"Every meeting we would go in saying, 'Well, this is the way it was, now it's changed, this is the way it is,' [until] the next week. So I think this is a problem. Internally we had a problem with the moving target of ecosystem management, MAGIS and SIMPPLLE and GIS [technical planning modeling methods]. And, I think externally, for the public that was a problem."

In general, then, members of the public, agency planners, and scientists agreed that public participation was appropriate for this ecosystem-based management situation, but that effectiveness was limited by the technical aspects of the problem and by who was involved. Melding technical knowledge with personal knowledge is a fundamental problem in planning (Friedmann 1987); communicating technical knowledge to the lay public in ways that are understandable yet not condescending is a challenge to scientists and planners. Learning, however, is a two-way street: the public has much to offer scientists and managers in terms of local knowledge, the social importance of various natural resource values, and the acceptability of management actions. The data also show that participants recognized other significant benefits of public participation, including building trust and enhancing relationships.

The Process Includes Affected Interests

Public participation processes that attempt to build consensus must include the belief systems that are affected by policy. This condition is reinforced by a scientist who stated,

"... If you have only a small group of people that are coming and they represent certain interests and the certain interests represent a third or a half of the public and you want to get a consensus that's 80 or 90 percent, it's not going to happen."

In this case study, all participants agreed that there had been legitimate attempts to bring all interests into the process. A public participant observed,

"Well, let's put it this way, I know for a fact that the Forest Service bent over backwards—they made a monumental effort to touch all groups that could possibly be interested, whether they were recreation, ranchers, ordinary citizens,

homeowners. Now, not every group responded, not every group participated."

Another member of the public stated,

"I think that it [the process/agency] accommodated anybody that was interested in the process."

Thus, there was recognition among all interviewees that a consensus building process must include various values and interests, and participants recognized a good faith effort on the part of the agency to be inclusive. This is an important finding because perceptions of process go to the heart of concerns about trust and legitimacy. A process that is viewed as exclusive or biased at the beginning will have little social validity at its closing, if it makes it that far.

Participants Can Accept or "Live With" Results

The nature of agreements made in a public participation process is the basis of consensus; as we noted earlier, there is a lack of attention to this fundamental concept in the literature. Consensus may mean unanimous opinion, general agreement, or a level of agreement where some participants may be happy and others may go along grudgingly. This diversity of definitions was recognized in the following statement by one citizen participant:

"I agree because people do mean different things. Some people mean total unanimity by consensus. And I certainly don't. And some people just mean majority rules. I don't mean that either. I mean by consensus that everybody makes the best faith effort to understand each other and understand what's on the table, what's being discussed, and what's being decided."

The variety of definitions of consensus can be a significant stumbling block to knowing when it has been reached and when to move on to other issues. However, in this study, most respondents independently identified a "can live with it" definition for consensus. For example, a manager defined consensus the following way:

"With anything that you're dealing with, all the players that are involved in it can come to an acceptance of what's going to take place. They may not totally like it, but they can live with it."

The needs of those who can't "live with" a proposed action should not necessarily be ignored.

It is often important to determine the background to their concerns as suggested by this manager:

"A consensus process then also takes into account those people who cannot live with something and trying to understand why they cannot live with it."

Others noted that living with the agreement was based on an ability to change the plan later if it was needed, as shown in this extensive quote from a member of the public:

"I think down the road that you just get kinda resigned that that is what happened and that is where the chips fall. This is probably one of the few areas where in the back of my mind I feel like the plan [SWC Planning Unit] could be modified if five years from now something isn't working; and if the plan has a protocol for evaluating how it's moving along, there ought to be an equivalent step in there that says, 'We need to shift some resources or we have some different information so we can draw some different conclusions now.' I feel like the type of management plan they came up with would allow for some flexibility in making some management changes that the group originally didn't probably anticipate or couldn't envision—unlike something like a highway."

However, another respondent felt that because of the diversity of interests and the heightened level of conflict in the state, even a "grudging" agreement may not be possible. Even the goal of consensus for public participation was questionable to this manager:

"They might strive for it [consensus], but they'll never get it. At least, not here. I just think there are too many different ideas and too many people too emotional, [reacting] too strongly to every change. I don't think consensus is possible, nor do I think it should be the goal. I think what we need to do is work together with our public and try to listen to what they have to say and incorporate their ideas wherever possible. But consensus is never going to be possible in Montana."

Respondents were asked if they could "live with" the results of the SWC planning processes. A manager noted,

"Well, that is kinda an interesting question. I think that the general population, after implementation, is going to be just fine with it because I think it's going to look pretty good. I think the members of the group that were adamantly

opposed to doing anything up there are not going to be able to accept anything, especially the planning portion of it. I think they look at that big map with all of the treatment areas and have kinda a gag reflex to it."

The fact that at least some respondents felt that they could "live with" the results was important in allowing the community to move on to other land use issues and questions. It also suggests that at least some values or goals were held in common among group members. This public participant noted that consensus may not have been crucial to non-participating members of the public but has allowed the community to move forward:

"Yeah, we're going [to] live with it. I think other people in the community have totally forgot all about it. They haven't kept up on it. It's OK because it's nice that it got resolved enough that they could leave it behind and go onto something else."

In summary, respondents tended to define consensus, not as a unanimous agreement, but as an action that some participants may not prefer but can "live with." This is important because if all agree on this definition it provides opportunities for negotiation among different groups in the public, tradeoffs among sets of actions, and, in general, an easier course than expecting a unanimous solution. However, respondents recognized that, if some participants cannot "live with" an action, then some responsive course should be taken to better understand the objections to the action.

Knowledge Is Distributed Equally Among Participants

People must engage each other on equal footing in order for authentic interaction to occur. In the Stevensville projects, Forest Service planners and scientists attempted to communicate the technical data and modeling needed to better understand the ecosystem. This was done through numerous public meetings and field trips. The effect of this attempt may not have been to resolve a particular planning problem as much as to increase general awareness of ecological processes, as suggested in this quote from a scientist:

"I think that we did reach a higher level of common understanding of the ecological events that have occurred in the Valley over the last 200 years. I think most people have bought into the idea that

fire is an important ecological force on the landscape. I think they've bought into the idea that the vegetation certainly has changed substantially in the last 150 years."

Attempting to bring all participants to a common level of knowledge about ecological processes and how they will be incorporated into management can be a time-consuming process, one in which some participants may drop out simply from exhaustion. Others may withdraw from the process if they come away from the first set of meetings impressed with the level of information being used and thus feel the agency can be trusted to use the best knowledge, as this agency representative noted:

"There was not a lack of availability of knowledge. I think the way I saw it was that we started out with a pretty good-sized, fairly diverse group and we went through the first phase where we were presenting information as we knew it and then trying to develop issues. It seemed to me that at some point a lot of those folks dropped out of the process and didn't come anymore and I think that what had happened was that those folks pretty well accepted the information that we were providing and they learned a lot through that phase and said, 'Well, OK, I learned what was going on,' rather than trying to define goals."

People vary in their capacity to assimilate and understand information, particularly in ecosystem-based management situations where many concepts—such as the role of fire—contrast with the knowledge people currently hold. Finding the point at which participants can understand and interpret knowledge is difficult, as this public participant suggested:

"I think people, the knowledge they brought there [to the process] with them sometimes didn't match the knowledge that was presented at the meetings. So that inter-conflict to me became expressed in the group and some sub-group type of conflicts—parts of that were never overcome. And I don't know that if you start out with different 'denominators' [different, distinct levels and types of knowledge] it's really difficult. It's going to be hard to identify the lowest common denominator unless it gets so basic as to not be useful for a management approach."

However, equal understanding of ecological processes and conditions did not, in and of itself, lead to greater agreement on proposed actions. A history of conflict between the public and agency

served as a context that inhibited even the discussion of basic biophysical conditions, as these two managers noted:

"... we weren't changing those folks' mind with the information we were presenting—and they weren't changing ours either. There was a lot of dialogue but not really much movement on either side. So there was the opportunity for those folks to acquire the knowledge that we were presenting, but on the other hand, I think that essentially [they] weren't buying what we were telling them."

"... people have barriers and they already believe what they believe and don't want to be confused with the facts. I think we did have a common knowledge base—as good as we could get."

Understanding the complex information presented to participants as they seek to build a consensus requires dialogue, a two-way flow of information. This respondent identified the importance of mutual respect in such a dialogue:

"The thing about consensus is that you always have to remind people over and over that you have to respect yourself and others, that you can't speak for someone else and you have to speak in a respectful way to others—you can't criticize someone else, you can discuss ideas but you can't criticize them. That is maybe one thing about federal agency—it kind of lets people take advantage of them, it kind of lets people give them a bigger kick in the butt because it's a federal agency and it's not something personal and people move in and out of the district."

Communicating scientific knowledge to the public and agency planners was a fundamental objective of the planning effort. The comments reported here suggest that achieving this goal was inhibited by value differences, particularly between the agency and the public. Which facts people agree to and which they don't hinders problem definition; the data presented both here and in the "problem definition" section above suggest disagreement about the problem definition in the Stevensville planning processes. Other factors, including differing belief systems about the management of public lands and differing trust levels, intervene in developing a consensus. The data suggest that scientists need to consider not only the varying beliefs but also the varying cognitive capacities of public participants when communicating the complex ecological principles of ecosystem based management.

The Agency Is Given Permission to Act

The idea of informed consent has been in the literature for many years. If the agency does not have the confidence of its public to implement actions, it has lost its legitimacy as agent of public policy. When one member of the public was asked if the agency had received permission to act, the response was definitive:

"No. I don't think that happened. Part of the reason it didn't is that the process, especially the second one [SWC,] went on for so long that basically for a period of time, five or six months, [that one interest group was] the only public that showed up. And so it wasn't possible for it to happen—for people to move as a group."

Other respondents suggested the difficulties in achieving this permission as demonstrated in the following quotations:

"If we reach consensus on anything in the Bitterroot, it's that no matter what's planned, it's going to take a long time to get there—everybody understands that now and that's pretty good. We reached consensus on the idea that there is a perceived problem out there."

"They [members of the public] came to the table with their own perception of the world, totally different than ours and we didn't change their mind. We tried to listen to each other, I think, but I don't think it ever went beyond that. It's the philosophies involved that are very contradictory. [Active management versus no management]—'nature knows best,' etc."

The above quote suggests a major dilemma for ecosystem-based management: given a paradigm that emphasizes management as experimentation, how does the agency attain credibility in regard to adaptive responses to ecosystem conditions? The individual above certainly did not perceive a willingness on the part of the agency to experiment and listen. If the agency is not willing to listen, then what legitimacy does the agency hold when it comes to assessing and altering plans for on-the-ground action?

Permission to act occurs at a general level and does not mean unanimous acceptance. In the complex and contentious situations confronting natural resource managers, unanimity would be rare and unrealistic to expect. One manager observed that not all people will agree with proposed actions

and that it is important for planners to recognize this. He had hoped

"... that we would at least get to the point where a majority of the people are very enthused about the course of action and a large section of the rest of the public are willing to live with it, while it may not be their best, it's OK. And, getting comfortable with the fact that there's always going to be some percentage, the fringe elements that just don't want to see something happen..."

While one manager was rather fatalistic about the project achieving consensus ("We will NEVER make everyone happy, nor is this possible"), a scientist felt that "it's better than no process whatsoever" even though this scientist felt that a consensus had not been achieved.

The difficulties of achieving consensus in a pluralistic and contentious setting were observed by one manager deeply involved in the process, who eventually questioned whether consensus should be a goal:

"I used to think so [that a consensus was possible]. I'm not sure it's possible or realistic. Things are too complicated and too diverse. The different values out there."

Another scientist felt that the way in which public meetings were held prevented a consensus from emerging:

"It depends how you define public involvement. If it's just a series of public meetings, I think it becomes very difficult to get consensus because in that format the public cannot play a role in having much input. ... Their bottom line was, 'Well, we've come through all this and folks still haven't really responded to us and our concerns.' So, I'm not sure much consensus was reached."

A citizen agreed with this perspective when he stated,

"I don't know that we're spending a year and a half to two years knocking our head against a wall trying to reach that [consensus] when it's pretty obvious on the onset that it's not going to happen."

Consensus can develop at many levels. The SWC planning process may have produced consensus about the general values and functions of forests, such as clean air or visual quality, but consensus at a more specific level, such as the type, location, and intensity of timber harvesting, may not have occurred. Many participants felt that,

while a good faith effort to involve the public took place, a consensus did not emerge from either the SSW or the SWC planning process. While public participation resulted in an enlarged understanding of ecosystem processes, what to do on public lands as a result of the conditions and processes occurring there was still subject to debate. Perhaps building consensus is not an appropriate goal, as this manager observed:

"Westcentral [SWC] may have pointed out maybe the futility in some of the things we were trying to do in terms of trying to reach consensus with everybody so I think we may readjust our framework and maybe not have that as a goal so much."

The results of this study suggest significant variability in how participants viewed each of the components of consensus. Variability within groups was also evident, particularly among public participants. These findings suggest that a consensus about the desired future and needed actions to get there may not have existed, despite nearly heroic efforts on the part of the Forest Service in conducting meetings and organizing field trips (as measured by the number and diversity), disseminating information, listening to participants, and creating multiple opportunities for input. This also suggests that judging the success of a public participation program on the number of meetings or participants may lead to false conclusions.

Discussion

Building consensus on natural resource management issues can only be described as a difficult process. Not only must planners work with the public in developing a shared vision of the future, but gaining common definitions of the particular problem may itself be challenging. This study clearly demonstrates these challenges. Several contending public groups, lack of trust in the managing agency, and a new paradigm of management made meeting the conditions for consensus difficult, if not impossible.

The public participation process used in SSW and SWC planning was extensive. While it did not necessarily lead to a set of actions every participant could live with, it did seem to result in a set of outcomes more interests could support than traditional NEPA-driven processes have led to. The

processes have produced other benefits as well: Participating members of the public appear better prepared to discuss other land use planning issues, managers now have more realistic expectations about what can be accomplished through public participation, and while not reported in this paper, scientists have a better concept of how to communicate technical concepts to the public (see Freimund 1998). Guthrie's (1997) research indicated that participants in the SSW and SWC processes defined success in a multi-dimensional manner, suggesting that attempts at consensus building may yield important, long-term benefits to both agency planners and the public.

Our results suggest several conclusions dealing with the SWC project in particular and consensus building in general as an objective of public participation:

- First, interviewees displayed somewhat different perceptions of most, but not all, of the six components of consensus identified above. For example, while a scientist felt that a mutually agreeable definition of the problem was developed, planners and the public apparently felt differently.
- Second, nearly all participants agreed that public participation was integral to the ecosystem-based planning used in this case study, although there was some question about the role of the public in technical aspects.
- Third, all participants agreed that the process was representative of those values and interests affected, at least at the local level. The public indicated that the Forest Service had made a good faith effort to include all stakeholders.
- Fourth, participants indicated that nearly all could "live with" the results of the process, even if they were not enthusiastic supporters of the outcome. Although the plan was administratively appealed by one participating group, the plan was upheld and no further appeals have been made. However, this aspect of consensus seems to be most problematic as a concept and in practice. Further research on varying approaches to this component is needed.
- Fifth, while participants showed similar perceptions about the distribution of knowledge, the acceptance of knowledge was explicitly

recognized among some as a function of world views, which differ between the agency and some of the public. This difference in world views may not be overcome through further data gathering, but may be addressed through additional dialogue that creates understanding of differences.

- Sixth, our observations suggest some differences in whether the agency was given permission to act. The use of administrative appeals indicates that, for at least one participating group, this permission did not occur.

Consensus building processes confront numerous barriers, including basic philosophical disagreements on how Forest Service lands should be managed. While the attributes of public participation success identified by Shindler and Neburka (1997) and the conditions for consensus identified here may be defined as necessary conditions for consensus, they are not necessarily sufficient for achieving it. Further research should explore other important variables such as the influence of "world views" regarding bureaucracy and nature. The importance of including affected citizens in developing the consensus building process in partnership with the agency needs to be investigated (McKinney 1998).

The results of this study contain significant implications for the general pursuit of consensus through public participation. The difficulty of achieving consensus in this typical Forest Service setting provides a basis for questioning the legitimacy of a drive toward consensus in public participation. Achieving agreement that a problem existed, as one scientist perceived, may have been a significant accomplishment, even if consensus on resolutions did not fully occur. In messy situations where goals are contested and scientists don't agree on cause-effect relationships, consensus seems to lean heavily on understanding the problem, so a focus on mutual learning may be a more appropriate goal than a focus on consensus, at least in the short run. In the long run, consensus may be a significant, desirable, and achievable goal because participants are acting on similar levels of knowledge and understanding of the problem. Several of our respondents noted how the content and procedural knowledge gained in this process was helpful in a later county-level comprehensive planning setting.

Participants attempt to find acceptable common ground, yet this common ground can be very

different from their ideal outcome. A successful consensus process requires cooperation and a balance of power among competing groups; if that is not achieved, groups are likely to seek other avenues for resolution of the conflict, such as litigation or lawmaking. One of the main goals of consensus is to resolve the conflict rather than to "win," and therefore it requires decision making that includes all parties. Resolving conflict is narrowly defined in this context to mean "coming to an agreement" rather than "finding an answer." Problems never stay solved because of constantly changing contexts (Ackoff 1974).

Building consensus is often more time-consuming than rational-comprehensive planning processes in the short term. In the long run, investments in consensus building may pay off in better and more widely accepted decisions. They may also pay off in terms of greater understanding of administrative and ecosystem processes upon which further consensus can be developed as new problems arise, although this benefit may be offset by later changes in what is at stake.

Consensus can be a successful way of resolving conflicts, but it is not appropriate for all situations and it will not always succeed. "A consensus process is appropriate when all of the stakeholders believe that they are likely to get something through consensus that they are not likely to obtain from any other arena" (McKinney 1997). Where a set of gains clearly comes at the expense of particular groups, consensus building processes are not only ineffective but may lead to disenchantment as they begin to fall apart. In this case study, common goals and definitions of the problem were only marginally perceived. Many public individuals clearly participated only on the basis of self-interest.

Consensus building processes may be appropriate only in situations in which every stakeholder can gain some benefits. An analysis of the situation is needed prior to entering into a consensus-seeking process. The case of a large-scale gold mine may be an example where consensus is not possible. If the primary issue concerns the social acceptability of the mine, consensus building processes will likely be inappropriate because there is no space for compromise. A mine is either built or it is not. In the case of management of forest lands, there may be more options, thus leading to the opportunity for benefits to all and thus consensus.

The process of building consensus can encounter considerable obstacles, including lack of skill in

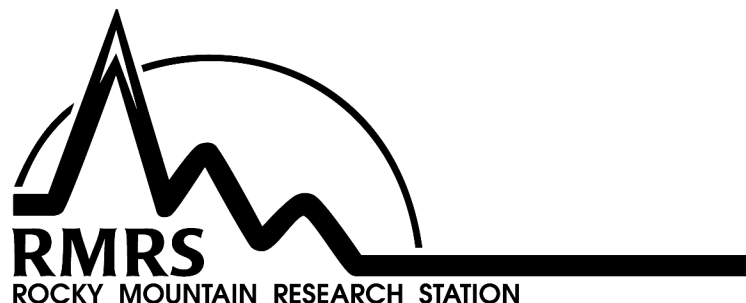
leading public participation programs (suggestions for overcoming these are made by Shindler and Neburka 1997) and a number of institutional barriers. A major institutional barrier is agency perception of the requirements of the Federal Advisory Committee Act (FACA), passed in 1972. This legislation prohibits advisory committees to the federal government that contain nonfederal employees without a specific charter from the General Services Administration. Because of several court cases involving FACA and natural resource planning, federal land management agencies have been reluctant to engage in intensive, consensus building public participation programs, lest the public groups involved be seen as advisory committees. The court interpretations of FACA have varied considerably, leaving many planners in a dilemma, wanting to engage the public in more deliberative processes but also wanting to avoid legal entanglements that may lead to invalidation of any resulting plan or decision.

The methodology used in this study was distinctly qualitative in nature. Our objective was to map out the dimensions of consensus and compare them with participant's views. Future research would involve gaining a better understanding of the quantitative importance and external validity of these dimensions in other natural resource planning situations. Other research might investigate the strategies various groups employ when they perceive their positions are minority or majority ones, strategies used when belief systems of participants simply do not allow some alternatives to be considered, and effective ways for participants to reach similar definitions of the problem.

Given the problematic, contentious, multidimensional character of many natural resource management settings, collaborative learning processes emphasizing participation by scientists, planners, and the public are often proposed as ways of dealing with conflict and arriving at consensus (Kusel and others 1997). In this sense, the desire to resolve conflict and achieve consensus so that action is possible is a legitimate hope. Yet, given the complexities, intensity of conflict, and significant institutional barriers, managers may be seduced into believing that all that is necessary to get the "permission to act" in messy situations is to establish a consensus-building group and hold extensive dialogue and informational meetings. Our research suggests that consensus building processes must meet a minimum of six conditions in order to receive that permission.

Literature Cited

- Ackoff, Russell L. 1974. *Redesigning the future: A systems approach to societal problems*. New York, NY: John Wiley and Sons. 260 p.
- Arnstein, Sherry R. 1969. A ladder of citizen participation. *Journal of the American Institute of Planners*. 35(7):216-224.
- Avery, Michael; Streibel, Barbara; Auvine, Brian; Weiss, Lonnie. 1981. *Building united judgment: A handbook for consensus decision making*. Madison, WI: The Center for Conflict Resolution. 124 p.
- Beard, Daniel. 1997. Letter opposing the Quincy Library Group bill (S. 1028). Personal Communication, September 20, 1997. Washington, DC: National Audubon Society. 6 p.
- Carpenter, Susan; Kennedy, W. J. D. 1985. Managing environmental conflict by applying common sense. *Negotiation Journal*. 1(2):149-161.
- Conner, Desmond M. 1988. A new ladder of citizen participation. *National Civic Review*. 77(3):249-257.
- Crowfoot, James E.; Wondelluck, Julia M. 1990. *Environmental disputes: Community involvement in conflict resolution*. Washington, DC: Island Press. 279 p.
- Fisher, R.; Ury, William. 1981. *Getting to yes: How to negotiate without giving in*. Boston, MA: Houghton-Mifflin. 133 p.
- Forester, John. 1989. *Planning in the face of power*. Berkeley, CA: University of California Press. 289 p.
- Forstner, Gordon; Bales, Jack. 1992. Building dialogue into the public consultation process (part 1). *Public Relations Quarterly*. 37(3):31-36.
- Freimund, W. 1998. The role of computerized communication and the presence of scientists information in the Stevensville Westcentral ecosystem analysis project. Technical Completion Report for INT-96067-RJVA. On file at Forestry Sciences Laboratory, Bozeman, MT. 19 p.
- Friedmann, John. 1973. *Retracking America*. Garden City, NY: Anchor Press/Doubleday. 283 p.
- Friedmann, John. 1987. *Planning in the public domain: From knowledge to action*. Princeton, NJ: Princeton University Press. 501 p.
- Friedmann, John. 1993. Toward a non-Euclidean theory of planning. *Journal of the American Planning Association*. 60(3):482-485.
- Gale, Richard P. 1991. Forest resource-dependent communities and the new forestry: How wide the welcome mat in the Pacific Northwest? *The Northwest Environmental Journal*. 7(1):7-33.
- Grumbine, R. Edward. 1994. What is ecosystem management? *Conservation Biology*. 8(1): 27-38.
- Guralink, D. B., ed. 1974. *Webster's new world dictionary of the American language*, 2nd edition. Cleveland, OH: William Collins + World Publishing. 1692 p.
- Guthrie, Kathleen. 1997. Measures of success in public involvement processes: An investigation of how managers, researchers and members of the public define success. Missoula, MT: The University of Montana, School of Forestry. 98 p. Thesis.
- Innes, Judith E. 1996. Planning through consensus building: A new view of the comprehensive planning ideal. *Journal of the American Planning Association*. 62(Autumn):460-472.
- Kusel, Jonathan; Doak, Sam C.; Carpenter, Susan; Sturtevant, Victoria E. 1997. The role of the public in adaptive ecosystem management. In: *Sierra Nevada Ecosystem Project: Final report to Congress*. Davis, CA: University of California, Centers for Water and Wildland Resources: 611-624.
- McCloskey, Michael. 1996. The skeptic: collaboration has its limits. In: *High Country News*. 28(6). May 13, 1996.
- McCool, Stephen F.; Ashor, Joseph L. 1984. Politics and rivers: Creating effective citizen involvement in management decisions. In: Popadic, Joseph S.; Butterfield, Dorothy I.; Anderson, Dorothy H.; Popadic, Mary R. *National River Recreation Symposium*; October 31-November 3, 1984; Baton Rouge, LA. Baton Rouge, LA: Louisiana State University, College of Design: 136-151.
- McKinney, M. 1998. *Resolving public disputes: A handbook on building consensus*. Helena, MT: State of Montana, Office of the Governor, Montana Consensus Council.
- McKinney, Matthew J. 1997. What do we mean by consensus: some defining principles. *Chronicle of Community*. Missoula, MT: Northern Lights Institute. 2 p.
- Moote, Margaret A.; Burke, Sabrina; Cortner, Hanna J.; Wallace, Mary G. 1994. *Principles of ecosystem management*. Tuscon, AZ: University of Arizona, Water Resources Research Center. 14 p.
- Nagel, Stuart S. 1995. Win-win policy: how to achieve consensus in public policy. *Policy Studies Journal*. 23(1):181-183.
- Potapchuk, William R. 1991. New approaches to citizen participation: Building consent. *National Civic Review*. 80(2):158-168.
- Selin, S. W.; Schuett, M. A.; Carr, D. S. 1997. Has collaborative planning taken root in the national forests? *Journal of Forestry*. 95(5):25-28.
- Shindler, Bruce; Neburka, Julie. 1997. Public participation in forest planning—8 attributes of success. *Journal of Forestry*. 95(1):17-19.
- Susskind, Lawrence; Cruikshank, Jeffrey. 1987. *Breaking the impasse: consensual approaches to resolving public disputes*. New York, NY: Basic Books. 276 p.
- Thomas, C. W. 1998. Managing and restoring public trust in government agencies and their employees. *Administration and Society*. 30(2): 166.
- Thompson, J. D.; Tuden, A. 1987. Strategies, structures and processes of organizational decision. In: Thompson, J. D.; Hammond, P. B.; Hawkes, R. W.; Junker, B. H.; Tuden, A. *Comparative studies in administration*. New York, NY: Garland Publishing: 197-216.
- U.S. Department of Agriculture, Forest Service. 1996. *Environmental Assessment for the Stevensville Westcentral planning unit*. Hamilton, MT: U.S. Department of Agriculture, Forest Service, Bitterroot National Forest. 100 p.
- Walker, G.; Daniels, S. 1996. The Clinton Administration, the Northwest Forest Conference, and managing conflict: When talk and structure collide. *Society and Natural Resources*. 9: 77-91.



The Rocky Mountain Research Station develops scientific information and technology to improve management, protection, and use of forests and rangelands. Research is designed to meet the needs of National Forest managers, federal and state agencies, public and private organizations, academic institutions, industry, and individuals.

Studies accelerate solutions to problems involving ecosystems, range, forests, water, recreation, fire, resource inventory, land reclamation, community sustainability, forest engineering technology, multiple use economics, wildlife and fish habitat, and forest insects and diseases. Studies are conducted cooperatively, and applications can be found worldwide.

Research Locations

Flagstaff, Arizona
Fort Collins, Colorado*
Boise, Idaho
Moscow, Idaho
Bozeman, Montana
Missoula, Montana
Lincoln, Nebraska
Reno, Nevada

Albuquerque, New Mexico
Rapid City, South Dakota
Logan, Utah
Ogden, Utah
Provo, Utah
Laramie, Wyoming

* Station Headquarters, 2150 Centre Avenue, Building A, Fort Collins, CO 80526

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, sex, religion, age, disability, political beliefs, sexual orientation, or marital or family status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 1400 Independence Avenue, SW, Washington, D.C. 20250-9410 or call (202) 720-5964 (voice and TDD). USDA is an equal employment opportunity provider and employer.