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Wilderness Planning: A Case Study in Dispute Resolution

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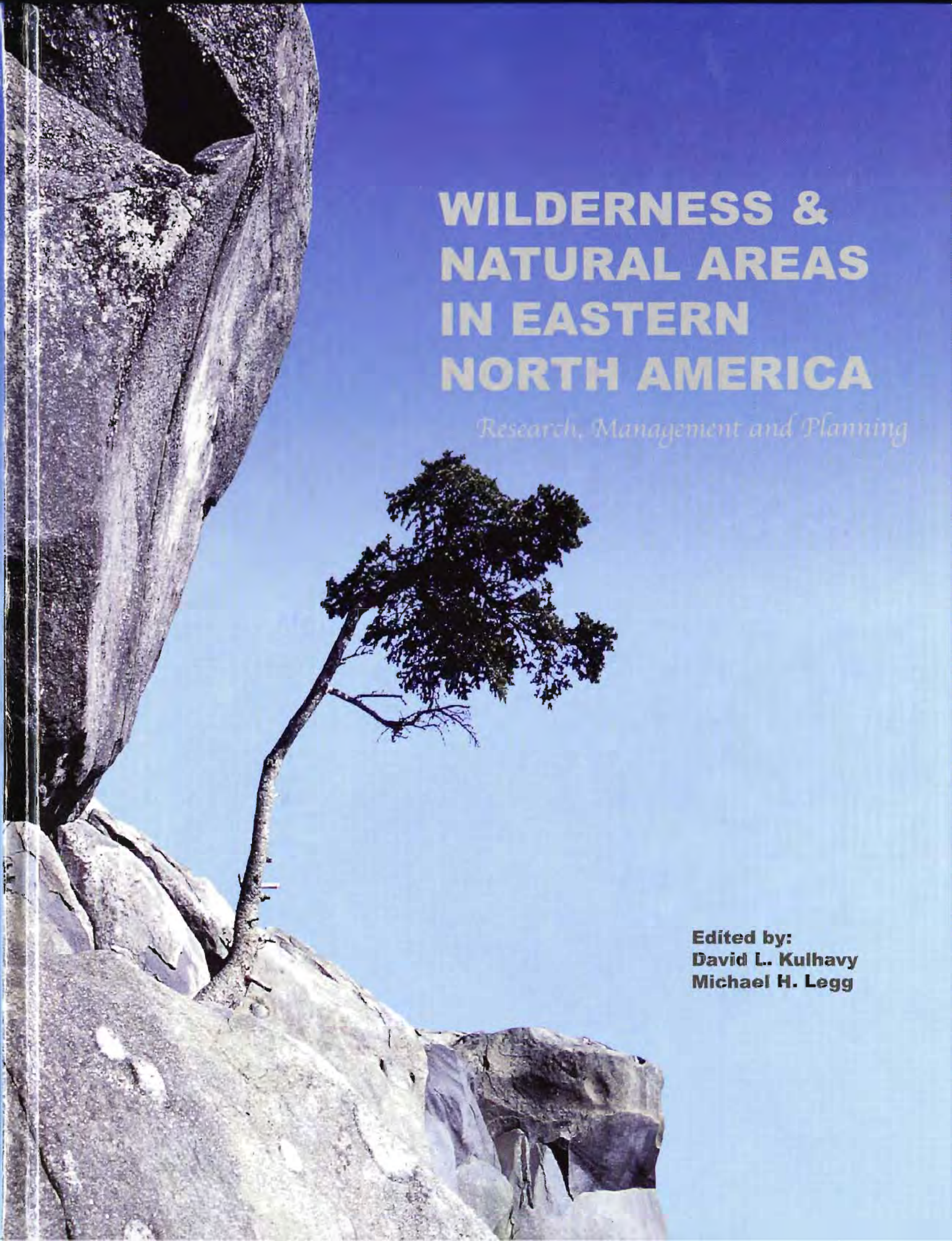

WILDERNESS & NATURAL AREAS IN EASTERN NORTH AMERICA

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Wilderness Planning: A Case Study in Dispute Resolution

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Abstract: Local landowners and environmental groups have historically disputed with the USDA National Forest Service in Texas over wilderness management issues such as wild and prescribed fire and management of the southern pine beetle (*Dendroctonus frontalis*). To help diffuse polarization and open lines of communication between agency personnel and the general public, the theory of transactive planning was applied with the LAC process on two wilderness areas. Data collection consisted of: 1) participant observation; 2) issue-evaluation surveys; 3) process-evaluation surveys; and 4) exit interviews. Results indicate the planning process aids in dispute resolution by reducing antagonistic relationships and fostering public consensus in land use planning.
Keywords: conflict, consensus, dialogue, dispute resolution, limits of acceptable change; mutual learning, public participation, and transactive planning

INTRODUCTION

In September 1992, the USDA Forest Service in Texas contracted a challenge cost-share agreement with Stephen F. Austin State University to develop a Limits of Acceptable Change (LAC) wilderness planning document for Upland Island and Turkey Hill Wilderness Areas on the Angelina Ranger District in East Texas. As a conceptual procedure, the LAC process evaluates the wilderness, determines acceptable conditions and then prescribes actions to protect or achieve those conditions (Stankey et. al. 1985).

Participants in the LAC process included USDA Forest Service personnel, Texas State Parks personnel, members of the Sierra Club, Texas Committee on Natural Resources (a local environmental advocacy group), the Native Plant Society, and local landowners. To participate in this study required a commitment to meet on a regular basis, discuss issues, and give input to the project manager (M.H. Legg). The group involved in the final evaluation consisted of 12 members including the project manager and the facilitator/coordinator (M. Rebori Tull).

Participant consensus was required for all recommendations of the planning group. Consensus was defined as creating and implementing a decision that all members of the group could support (Krumpe 1992). Consensus incorporated four levels: 1) Can easily support the action; 2) Can support the action but it may not be a preference; 3) Can support the action if minor changes are made; and 4) Cannot support the action unless major changes are made. Participants agreed consensus meant no one in the group expressing a level four concern.

One study objective included evaluating the LAC Process as it relates to the theory of transactive planning and to determine if this style of planning reduces disputes in adversarial relationships. The study uniquely allowed Forest Service personnel the opportunity to participate in the process along with citizens since the agency was neither project manager nor facilitator.

BACKGROUND

Historically, environmental groups and local landowners in the region have disputed with the USDA Forest Service over wilderness management issues such as wild and prescribed fire and suppression techniques for southern pine beetle (*Dendroctonus frontalis*). Prior to

Upland Island and Turkey Hill wilderness designation in 1984, many environmentalists perceived the USDA Forest Service as timber harvesters and not as wilderness advocates. To help reduce the expanding polarization between agency personnel and the public, the theory of transactive planning was applied in an attempt to open lines of communication between citizens and agency personnel.

Transactive Planning, as developed by John Friedmann, is defined as "the process by which scientific and experiential knowledge is joined to action through an unbroken sequence of interpersonal relations" (Friedmann 1973). Barriers to effective communication exist among citizens, whose knowledge draws primarily on personal experience in the wilderness, and natural resource professionals who primarily draw from scientific and technical knowledge about the wilderness. In order to bridge this chasm of communication between the citizen and agency, "... a continuing series of personal and primarily verbal transactions between them is needed, through which processed knowledge is fused with personal knowledge and both are fused with action" (Friedmann 1973).

CONFLICTS AND DISPUTES

The difference between conflicts and disputes needs distinction with respect to this case study. Disputes involve "differences of interest", conflicts involve "non-negotiable human needs"(Burton and Dukes 1990). Unfortunately not all issues easily categorize into a dispute or a conflict. When dealing with cultural, social, or individual values (such as wilderness) values tend to fall between dispute and conflict. Values often change over time according to changes in personal adaptations and growth. However, as Burton and Dukes point out, the most strongly held values may also tie into personal identity and ought to be treated as needs, thus constituting a non-negotiable interest or conflict.

Burgess and Burgess in 1994 drew greater distinction between conflict and dispute:

> Environmental *conflict* refers to long-term divisions between groups with different beliefs about the proper relationship between human society and the natural environment. ...*Conflicts* between these groups are played out in a seemingly endless series of incremental *disputes* concerning the enactment of specific policies (Burgess and Burgess 1994).

Therefore, in this case study, conflict refers to the historically divisive relationship between agency personnel and the general public. The dispute centers around the differences in planning participants' ideas regarding wilderness management and policy guidelines.

METHODS

Data collection included: 1) participant observation; 2) issue-evaluation surveys; 3) process-evaluation surveys; and 4) exit interviews.

Participant Observation

Relationship interactions and group dynamics among planning members were recorded in a journal. The participant observation method enables the observer to get to know participants as individuals and can lead to a break-down of the "us-verses-them" syndrome making this methodology well suited to determine dispute resolution. As participant observer, coordinator, and facilitator, we had to maintain neutrality in all meetings of the participants throughout the LAC process.

Issue-Evaluation Survey

The issue-evaluation survey measured change in importance of conflicting issues among the planning participants as the LAC process progressed toward a draft management plan. A 5-point Likert scale ranked issue-evaluation surveys to weigh respondents' level of importance: Not Important = 1.0; Very Slightly Important = 2.0; Slightly Important = 3.0; Moderately Important = 4.0; and Very Important = 5.0.

Participants listed land use or policy conflicts (disputes) of concern to them, or those they viewed as affecting the planning process. Comparisons were made of issue changes, rank changes, and the addition or deletion of issues. Assessed data determined whether disputes increased, decreased, or ceased as the process evolved. Issue surveys measured both individual change and overall group change in relation to ranked disputes. Surveys were administered 3 times for Upland Island and twice for Turkey Hill.

Process-Evaluation Survey

Process-evaluation surveys (McLaughlin 1977, Stokes 1982, and Ashor 1985) assessed the effectiveness of the planning process, tested

for the elements of transactive planning, and measured participants' attitudes about the planning process. Questions on the process-evaluation survey reflected social indicators to measure "hard-to-quantify" aspects of the planning process itself (such as frustration, trust, legitimacy, responsiveness, etc.).

A 5-point Likert scale weighed respondents' level of agreement: Strongly Agree = 1.0; Agree = 2.0; Neither Agree nor Disagree = 3.0; Disagree = 4.0; and Strongly Disagree = 5.0. Therefore, the lower the number the higher the agreement score.

A Mann-Whitney rank sum test at the $p > 0.05$ level tested for statistical differences on overall process-evaluation scores between agency personnel and citizens. Administered process-evaluations occurred 5 times during the contract period. Responses were analyzed for changes based on both raw number differences and statistically significant changes. Survey responses were also compared against interview elucidations.

Exit Interviews

The exit interview measured participants' experience with the planning process and was conducted one-on-one with the researcher. A tape recorder documented each response and an interview guide consisting of ten open-ended questions formed the semi-structured interview. This type of qualitative research provided new information and insights into individual frustration, distrust, and conflict. The interview was conducted at the end of the Upland Island LAC since the same individuals participated in both processes.

RESULTS AND DISCUSSION

Participant Observation Results

Previous planning efforts often resulted in polarizing interests and widening the communication gap between citizens and USDA Forest Service personnel. The innovative LAC process included the public as part of a team with agency personnel. Although time consuming, this style of planning strived to establish informed consent among a group of individuals with various interests. As a result, public and agency personnel worked together for common solutions.

The most noticeable effect involved witnessing the development of positive working relationships. The LAC process and transactive style of planning provided the means for open lines of communication to evolve. This evolution enabled citizens to become acquainted with agency personnel and view them as individuals. Agency personnel began talking to and listening to individuals with whom they had not interacted positively in the past. As new relationships emerged, citizens gained respect for the District Ranger and understood his support of wilderness. Agency personnel also gained respect for citizens and understood their commitment to wilderness values. Hence, both groups began meeting on common ground.

Issue-Evaluation Results

Originally the Upland Island Wilderness LAC process generated 31 total issues. At the end of the Upland Island LAC process, members identified 13 issues. Originally the Turkey Hill Wilderness LAC process generated 46 issues and ended the process identifying 25. A decrease in overall issues occurred at the end of both LAC processes.

A variety of circumstances caused a decrease in listed issues. Some initial issues fell outside the process scope, (e.g., "[USDA Forest Service] should not be under the USDA", etc.) A majority of issues (77 percent) reached resolution through group discussion, (e.g., "human influence/intrusion", "exotic species in the wilderness", "group size", "amount of designated trails", etc.) As some issues dropped in importance (i.e. raw score rank), other issues emerged. New issues reflected current group discussion as participants' knowledge of wilderness management grew. Fire remained a prominent issue throughout both LAC processes, however its focus evolved. Initially fire concerned "should we" and progressed to "how do we", "what regime, intensity and frequency?", etc.

Three new issues appeared in the final Upland Island issue survey as the highest ranking issues affecting the planning process below fire. These new issues directly resulted from dialogue and mutual learning. The four highest-ranked issues at the end of the Upland Island LAC Process included: 1) Fire; 2) Ecological/Species Diversity; 3) Human Impacts/Use; and 4) Protecting/Restoring Natural Processes.

At the end of the Turkey Hill LAC, the 3 highest-ranked issues consisted of new issues that emerged from discussion and included: 1)

Education (about the importance and purpose of wilderness to both the public and managing agency); 2) Monitoring (to determine if our LAC plan is on track);and 3) Budgets (to fulfill issues 1 and 2). These issues also resulted from dialogue and mutual learning.

Process-Evaluation Results

The initial Upland Island evaluation (14 July 1993) recorded a statistical difference for overall rank sum scores between agency and non-agency (citizen) responses (Table 1). Statistical differences indicate the two groups had different perceptions regarding the planning process. Higher citizen scores reflect less support for the process while lower agency scores reflect more support for the process overall. Subsequent process-evaluations for Upland Island and Turkey Hill processes detected no statistical difference in responses between the two groups.

The most controversial issue among participants pertained to wild and prescribed fire. After participants reached informed consensus on the statement "fire is a natural process", the focus of fire as an issue shifted. Planning members now asked themselves, "how do we return a natural process to wilderness?" This issue became the nexus for the remaining issues.

The second and subsequent testing periods found no statistical difference between agency and non-agency scores (Table 1). In fact, as the process continued, citizen scores grew more supportive of the process overall. Agency scores continued to support the process, however not as strongly as initially recorded.

Table 1. Comparing Overall Rank Sum Scores For Process-evaluations Between Agency and Non Agency Participants for Upland Island (UIW) and Turkey Hill wildernesses

	UIW 1 07/14/93	UIW 2 09/23/93	THW 1 12/15/93	THW 2 04/05/94
Agency	213.8a	241.5a	241.5a	254.0a
Non-Agency	283.6b	226.5a	223.5a	211.0a

Comparison of scores apply between study groups.
Scores with the same letter are not statistically different ($p < 0.05$).

Table 2. Average Agreement Scores For Administered Process-evaluations.

	Upland Island LAC Process				Turkey Hill LAC Process			
	Agency		Non-Agency		Agency		Non Agency	
	7/14/93	9/23/93	7/14/93	9/23/93	1/24/94	4/5/94	1/24/94	4/5/94
Mutual Learning	1.50	2.00	2.00	1.75	2.00	2.00	1.75	1.75
Authentic	2.00	2.00	2.40	2.25	2.00	2.00	1.75	2.00
Integrate People	1.00	2.00	2.00	1.75	2.00	2.00	2.00	1.75
Respect Differing Views	2.25	2.00	2.20	2.00	2.00	2.00	2.25	2.00
Incorporate Input	1.75	2.00	2.00	2.25	2.50	2.00	2.50	2.50
Conflict Acceptance	1.75	1.50	2.00	1.75	2.00	2.00	1.50	2.25
Satisfied Compromise	2.30	2.50	2.40	2.25	2.00	2.00	2.25	2.25
Concerns Expressed	1.50	1.50	2.00	2.00	1.50	2.00	1.75	1.75

As documented in earlier works (McLaughlin 1977, Stokes 1982, Ashor 1985), the elements of transactive planning (dialogue, mutual learning, and societal action) also proved evident in this case study as demonstrated through participant observations and process-evaluation surveys. Overall average agreement scores indicate elements of transactive planning and social indicators to reflect process attributes representative throughout the LAC process. Table 2 provides a comparison of overall average agreement scores reflecting social indicators represented in the process and respondents' level of agreement.

Exit Interview Results

In assessing whether or not this style of planning resolves disputes among adversarial groups all participants responded "yes", especially regarding the dispute over fire:

> Of course it is, and I think it has to go beyond this, there has to be an educational program or educational information that can be available within these [environmental] groups and to the general public, we [natural resource professionals] have to do a better job of selling the importance of these issues. Apparently it is not common knowledge even among these conservation groups and environmental groups, I'm really surprised of their lack of knowledge or understanding of the basic [natural] processes.
>
> It [the process] really opens it up, I think it was a very good clearing house, to get everything out on the table, usually you have people arguing and yelling and screaming at each other.

When evaluating public frustration toward the USDA Forest Service, some citizen participants expressed that their frustration prior to the process resulted from administrative constraints and policies. Other participants cited frustration based on previous actions by the land managing agency, especially wilderness policy for the suppression of southern pine beetle.

Although southern pine beetle management fell outside the LAC scope (due to the Final Environmental Impact Statement for the Suppression of Southern Pine Beetle) (FEIS-SPB 1987) discussion still ensued because the issue frustrated so many participants.

Forest Service personnel felt frustrated toward citizens, adjacent landowners, and industry regarding the southern pine beetle issue. Another agency frustration related to proper wilderness funding and the ability to maintain an employee in the wilderness either full or part time. Obviously some frustration still remains, but the opportunity to convey their concerns aided in reducing the *level of frustration.*

A common feature of disputes within conflictual relationships involves the "us-verses-them" attitude. This process succeeded in breaking that syndrome. As one participant expressed in the interview:

> I think that we've gotten to know each other better and to know each other as individuals and not just the environmentalist or the terrible agency person. There are a lot of points we agree completely on as individuals and that sort of discussion has come out at the meetings.

Relationships among this group of participants began to restructure as a result of the lines of communication opening up. Although only a first step, this process produced a monumental first step. Overcoming attitudes of mistrust does not happen overnight.

> ...[I]t takes a long, long, time, it takes a long-established relationship, and that just doesn't happen within a few months, within a few meetings, which is really all we have had. It takes much longer, but this is the first step I think, and we have made quite a bit of progress I would say.

CONCLUSION

The LAC style of planning coupled with the theory of transactive planning succeeded in resolving disputes within the process scope. New working relationships began to evolve, not based on previous assumptions or stereotypes, but rather ones grounded in the authenticity of its members.

This case study laid the foundation for informed public consent in land use planning. The overall purpose in this style of planning works to arrive at a level of understanding where all participants reach an agreeable decision.

Previous studies regarding transactive planning and the LAC process proved beneficial (Stokes 1982, Ashor 1985). Unfortunately, the Federal Advisory Committee Act (PL 92-463) recently ceased most LAC processes due to citizen participants being viewed as a task force advising a federal agency (Stokes pers. comm.). Under PL 92-463 a federal agency must financially compensate individual members of a citizen task force. The benefit of using a voluntary citizen task force results in the overall community development that evolves from the process, not in the financial compensation of their time and effort. A community engaged in a mutual learning forum becomes a community capable of using disputes creatively to solve its problems, and consequently develops skills at guiding its own direction.

the interested public and agencies to meet and discuss relevant issues builds informed consent. Without such a foundation for relationships to evolve, disputes may become intractable and thus never get resolved through dialogue and mutual learning.

Public involvement strategies need to go beyond traditional frames of planning to prevent decisions consisting of short-sighted and reactionary-based answers. A facilitator offers one avenue of prevention. A facilitator neutral to the issues can guide discussion and diffuse polarization to allow planning groups to arrive at informed consensus. Decisions arrived at in this type of a forum become rooted in common goals among agency and non agency people. One step toward resolving disputes in land use planning arises from informed public consensus based on candid dialogue and mutual learning between all participants.

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