CAN AGENCY-LED INITIATIVES CONFORM TO COLLABORATIVE PRINCIPLES? EVALUATING AND RESHAPING AN INTERAGENCY PROGRAM THROUGH PARTICIPATORY RESEARCH

by

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Can Agency-Led Initiatives Conform to Collaborative Principles? Evaluating and Reshaping an Interagency Program Through Participatory Research (321 pgs).

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This dissertation explores the question of whether agency-led initiatives can conform to collaborative principles. I examine different models of public policy and use a political ecology framework to help define/justify principles by which to evaluate collaborative initiatives. Consistent with the theoretical concerns of political ecology, which emphasizes the importance of examining contextual factors across multiple scales, I explore this research question using a case study research strategy. The *Initiative for Accelerating Cooperative Riparian Restoration and Management* serves as the case study. This represents a current, Federal-level, interagency (BLM, USFS, NRCS) strategy designed to facilitate cooperative riparian-wetland management. To gain a working knowledge of the day-to-day activities of the initiative and an understanding of the institutional context within which it operates, both critical to an effective evaluation of institutional initiatives, I used a participatory research framework.

Results show that the principles underlying the riparian initiative reflect the tenets of collaboration. However, implementation activities often differed from these principles. Those implementation activities that conformed to the tenets of collaboration have demonstrated the most success while less successful activities failed to foster the type of social environment needed to facilitate collaboration.

One of the barriers to collaboration and large-scale success is the institutional context within which the initiative operates. Whereas the principles (if not all the practices) of the riparian initiative adhere to the tenets of collaboration, the underlying structure of land management agencies as bureaucratic institutions does not. Specifically, these institutions create an environment where the individual level characteristics (ownership, commitment, innovation) needed to ensure their success are not rewarded.

To increase the likelihood that agency-led, collaborative initiatives will be successful in the future, institutional structures must be transformed to ensure the creation of an environment where practices and behaviors that reflect collaborative principles advanced by agency-led initiatives are seen as accomplishments rather than risks. In addition to exploring these institutional issues, the conclusions discuss changes in the riparian initiative to bring practices more in line with tenets of collaboration that were made as a part of the ongoing participatory evaluation.

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Chapter One: Introduction

Natural resource policy, planning, and decision-making in the United States has historically been more attentive to, and adept at, addressing the bio-physical characteristics of resource management, while social processes have not been adequately understood or addressed in management frameworks. This pattern dates back to the emergence of the Progressive Era management paradigm, at the turn of the previous century, which constructed natural resource management issues as technical problems to be resolved in the public interest by unbiased scientific experts. However, in the 1960s a strong challenge to this perspective emerged from a public (including non-government and environmental organizations) that showed an increasing distrust in governmental agencies, demanded a greater role in natural resource decision-making, and expressed a desire to see a broader range of societal values addressed in natural resource planning and policy (Dana & Fairfax 1980; Shannon 1981). These public challenges led to significant legislatively mandated changes in agency planning policies through passage of statutes such as the National Environmental Policy Act of 1969, and the National Forest Management Act of 1976.

The immediate intent of these policy changes was to address concerns about the lack of opportunity for public input and the limited range of societal values being addressed by natural resource planning and management by opening the process to public participation. One of the ultimate goals of these changes was to reduce public controversy and conflict over natural resource planning and management (Shannon 1981). However, both early critics in the 1970s (Bardach & Publiaresi 1977; Shannon 1981) and agency

sponsored analyses in the 1990s (Larsen, et al 1990; Shands et al 1990) noted that these policy changes were geared toward providing opportunities for public review, but did not build sufficient understanding of underlying values or create adequate opportunities for true participation in the actual process of negotiation and dialogue required to reach a decision. As a consequence, the trend since the 1970s has been toward increased rather than decreased conflict. For example, the number of administrative appeals filed on Forest Service planning efforts increased from 584 in 1983 to 1298 in 1988 (Manring 1993). Additionally, a 1990 analysis indicated that since the 1976 passage of the National Forest Management Act, not a single forest plan was approved without appeal (O=Loughlin 1990).

The trend of increasing public conflict and controversy over the last decade has led to increased interest in, and support for, more effective public participation within natural resource policy, planning, and decision-making. As a result, collaborative approaches to resource management have gained popularity. Collaboration is defined as, "The pooling of appreciations and/or tangible resources (e.g., information, money, labor, etc.) by two or more stakeholders to solve a set of resource problems which neither can solve individually" (Gray 1985:912 *as cited in* Yaffee et al 1997:1). Supporters of collaboration argue that these approaches not only allow for more effective public participation within natural resource management, but also provide a means for bridging fragmented ownerships and facilitating cross-jurisdictional perspectives and action (Yaffee & Wondolleck 1997; Brunson 1998).

Although this is true, it is important to note that collaboration is not simply a means for obtaining public participation. Rather, collaboration represents a

fundamentally different model of institutional decision-making. Unlike traditional models, collaboration rests on the assumption that the public interest can only be identified, understood and advanced through the creation of forums for civic dialogue and mutual learning. Furthermore, a collaborative decision-making model incorporates scientific information, local knowledge and/or concerns, and national priorities and/or interests.

According to Gray (*as cited in* Yaffee et al 1997:1-2), a collaborative model offers advantages over traditional decision making methods in the following situations:

- The problems are ill-defined, or there is disagreement about how they should be defined;
- Several stakeholders have a vested interest in the problem and these stakeholders are interdependent;
- The stakeholders are not necessarily identified *a priori* or organized in any systematic way;
- There may be disparity of power and/or resources for dealing with the problems among the stakeholders;
- Stakeholders may have different levels of expertise and different access to information about the problems;
- The problems are often characterized by technical complexity and scientific uncertainty;
- Differing perspectives on the problems often lead to adversarial relationships among the stakeholders;
- Incremental or unilateral efforts to deal with the problems typically produce less than satisfactory solutions;
- Existing processes for addressing the problems have proved insufficient and may even exacerbate problems.

Although there are instances in which collaborative efforts may prove more successful than others, a general characteristic of these efforts is that they are flexible to the conditions of a particular situation. Since there is no recipe, or cookie-cutter approach for collaboration, a variety of natural resource based activities that fall under the heading of

collaboration (e.g., community-based conservation, watershed partnerships/councils, co-management, citizen monitoring groups, and civic environmentalism).

One natural resource arena in which collaborative approaches have been increasingly applied is in the management of water resources. There are a variety of reasons for this, including the increasing conflict over the demand for water and the need for cooperative management approaches across jurisdictional and administrative boundaries. First, there is increasing demand for reliable supplies of water for domestic, agricultural and industrial consumption worldwide. Although the demand for water continues to increase, water is a finite resource (Elmore et al 2001). As a result, many areas throughout the world have experienced dwindling water supplies and availability (Elmore et al 2001). CIA analysts note the potential for escalating conflict, and warn that future wars will be fought over the need to secure adequate supplies of water (Anonymous 2003). Similarly, the Stockholm Water Symposium, a panel of international resource experts note that "by the year 2025, as much as two-thirds of the world's population will be living with water shortages or absolute water scarcity" (Anonymous 2003). Therefore, what we do with the water we currently have is a matter of utmost importance.

Riparian-wetland areas play an important role in water conflicts because they aid in the storage of water, which is critical to ensuring a life-sustaining supply of this critical resource. Although riparian-wetland areas comprise a relatively small percentage of the land base, healthy systems provide tremendous public benefits (e.g., clean water, habitat for fish and wildlife, irrigation and livestock water, aquifer recharge, wood products and others). However, many of these systems within the United States (and worldwide) are

currently functioning below their potential due to a legacy of programs and practices that are now considered unwise or even harmful. Although there is growing agreement about the importance of watersheds and riparian areas, there continues to be considerable disagreement about the existing conditions of these resources, the types of uses that are appropriate, and the treatment and tools that can be successfully employed to restore and maintain them. As a result, riparian-wetland management has been characterized by lawsuits and regulatory approaches, which often leave out the people who must implement the solutions and who are most directly affected by the consequences of the decisions.

This leads to the second reason for the increase in collaborative approaches to watershed management, which is the fact that stream and riparian zones connect communities and landowners. Since water resources are typically geographically nested within multiple jurisdictional and administrative boundaries, the responsibility for restoring and managing them is often shared among people with differing needs and value systems. It is generally not possible for a single landowner to restore or maintain riparian and stream conditions within his or her particular ownership boundaries because of problems or practices at other locations within the watershed. Thus, successful watershed management activities are premised on the need for cooperative, place-based efforts that incorporate the needs and concerns of individuals who reside both up and down stream.

One example of a current federal level effort designed to promote collaborative, place-based and cross-jurisdictional natural resource management is the *Initiative for Accelerating Cooperative Riparian Restoration and Management* (riparian initiative).

The riparian initiative is an interagency strategy that is sponsored by the Bureau of Land Management (BLM) and the US Forest Service (USFS), in partnership with the Natural Resource Conservation Service (NRCS). The National Riparian Service Team (NRST) is an interagency, interdisciplinary team that was created in 1996 to administer the interagency strategy. The team's founders believe that "riparian restoration will not happen by regulation, changes in the law or more money - or any of the normal bureaucratic approaches. Rather, it will occur through the integration of ecological, economic and social factors, as well as through the participation of affected interests" (NRST 1997:1). They believe that "because riparian-wetland areas often pass through or are shared by numerous landowners, a collaborative approach, applied at the ground level, in a watershed context, is the only avenue to successful restoration and future management" (NRST 1997:1).

This study has been designed to describe and evaluate the *Initiative for Accelerating Cooperative Riparian Restoration and Management* as a mechanism for promoting collaborative natural resource management. I drew primarily upon two sets of literature (political ecology and public policy models) to develop a framework for guiding my research. The first objective of this study was to define and situate the principles underlying the *Initiative for Accelerating Cooperative Riparian Restoration/ Management* within the various frameworks presented in the literature regarding democracy, collaboration and community-based natural resource management. The second objective was to apply these theoretical approaches to evaluate the current implementation and outcomes of this strategy, paying close attention to the factors at multiple levels that facilitate/constrain the long-term feasibility of this effort. My

intention was to not only provide critical feedback to the riparian team and their program coordinators, but also to contribute to the development of an analytic framework for evaluating collaboration and community-based resource management.

In the following chapter (Chapter 2), I evaluate four public policy models in relation to the concerns raised by political ecologists including attention to historical political and material struggles across multiple scales (nested scales of analysis). In this chapter, I propose the dialogic model, identified by Williams and Matheny (1995), as a standard for comparing and evaluating alternative collaborative management approaches.

Chapter three outlines the study design and methods used to structure my research and analysis. In this chapter, I provide a detailed explanation of the participatory nature of the evaluation approach, as well as the specific methods that were used to collect and analyze data. I conclude chapter three with a discussion of ethics and the manner in which the research process and findings should be evaluated.

Chapters four through six present my research findings. In chapter four, I provide an overview of the historical development of riparian policies and programs within federal land management agencies, and the activities that led to the creation of the *Initiative for Accelerating Cooperative Riparian Restoration and Management.* In the second half of chapter four, I provide a detailed discussion of the riparian initiative in terms of the goals/objectives and tools/processes used. This discussion is presented as part of my research findings because a more detailed description of the initiative was created as part of the evaluation process.

In chapter five, I evaluate the riparian initiative in terms of four dimensions of success: the existence of a functioning network; the achievement of increased awareness;

the provision of quality services; and evidence that participants have adopted initiative principles aimed at improving cooperation and riparian health. Study findings indicate that initiative implementers have been successful in terms of increasing awareness and providing quality services. However, the initiative as a whole has been less successful than anticipated in terms of improving cooperation and riparian function across a large scale. Although there have been notable examples of participant adoption of initiative principles and on-the-ground improvements, these are evident only on a case-by-case basis and have been largely attributed to the place-based problem solving and capacity building activities (service trips) typically carried out by the NRST. There was less evidence of adoption and improvements as a result of Proper Functioning Condition (PFC) workshops, which are typically carried out by state-level cadres and focus primarily on the bio-physical aspects of riparian-wetland management.

In chapter six, I present a detailed discussion of individual and institutional level factors that facilitate and constrain the success of the riparian initiative as identified by interview respondents. One of the most important findings that emerged from this portion of my analysis was the fact that the institutional context within which the riparian initiative operates not only presents a number of formidable barriers to the success of the riparian initiative, but is also threatening its survival. First, the three federal agency sponsors have historically demonstrated differing levels of political support for and/or willingness to allocate material resources (e.g., money, supplies and staff) to the riparian initiative. This has constrained the ability and willingness of network members (initiative implementers) to commit to the range of activities associated with the riparian initiative. Second, and more importantly, respondents noted that the current structure of

government bureaucracies is marked by shifting priorities, a preference for quantitative information, and a reductionistic, fragmented, and outcome based incentive structure that is centered around the bio-physical aspects of natural resource management and tends to privilege the maintenance of the status quo rather than reward the type of innovation and risk-taking associated with change. Such an institutional structure is incapable of supporting the activities associated with the riparian initiative or of encouraging the participation of individual implementers who possess the personalities and characteristics (ownership, commitment, openness to innovation, broad perspective) needed to ensure success. This raises cause for concern because the future existence of the riparian initiative is inexorably linked to its ability to gain a foothold or become routinized or institutionalized within this structure.

In the final chapter, I revisit the principles underlying the revised version of the dialogic model presented by Williams and Matheny (1995) to provide a reference for situating and discussing the riparian initiative as a model of collaboration. I conclude that the principles underlying the riparian initiative are consistent with a dialogic model of collaboration; however, implementation practices often deviated from these principles. The forums for dialogue and decision-making that are created during service trips tended to best reflect the dialogic model; whereas PFC workshops tend to reflect more of a technocratic or managerial approach. Although the practices associated with service trips were most consistent with the riparian initiative's principles, the study results identified a number of areas that could be strengthened. For instance, engaging in 'pre-work' aimed at producing a more complete understanding of the issues at hand and ensuring the up-front participation of all relevant stakeholders.

Another way in which the riparian initiative reflects the dialogic model is the creation of the riparian coordination network as a means for facilitating place-based, cooperative riparian restoration and management, as well as linking pockets of local action to larger power (political and economic) structures (e.g., federal land management agencies). However, evaluation results indicate that many network members have been unable to function effectively in this role because of the barriers presented by the institutional context within which they are situated. In an effort to address this issue, the NRST is lobbying for additional agency support and working to influence agency policy. They are also working to develop alternative (non-governmental) sources of support through the creation of new partnerships and the solicitation of additional resources (financial and 'labor'). The final section of chapter seven presents a number of recommendations regarding the future analysis of existing data and the design of later studies.

Chapter Two: Literature Review

Introduction

In the following chapter, I summarize and integrate three sets of literature (political ecology, public policy models, and natural resource decision-making) to identify an analytic framework for evaluating collaborative, community based resource management. First, I review the central philosophical commitments underlying a political ecology perspective. The following key concepts are addressed: importance of historical relationships and conflicts; consideration of ideal and material dimensions of power; attention to nested scales; and recognition of the relationship between human agency and social structures. I begin by outlining these concepts because they influence my critique of alternative models of public policy, as well as inform my discussion of collaborative natural resource management.

In the second portion of this chapter, I address the concept of citizen participation in public policy. I give attention to both the historical development of alternative models of citizen participation, as well as to the scale at which this participation occurs (e.g., national scale, and institutional or policy scale). Regarding the institutional or policy scale, I briefly outline and critique three alternative models of policy and decision-making (managerial, pluralist, communitarian) as presented by Williams and Matheny (1995). I conclude this section by outlining Williams and Matheny's fourth model of public policy (dialogic), which I later use to inform my discussion of natural resource decision-making and to guide my understanding and evaluation of the riparian initiative.

In the third section of chapter two, I discuss natural resource policy and decision-making. I identify three historically distinct eras: Progressive era management, the era of NEPA based management, and the emerging era of ecosystem management. I then discuss collaboration, the current decision making framework advocated under ecosystem management, in light of earlier discussions regarding the dialogic model of public policy. Finally, I identify a number of factors that exist at multiple scales that either facilitate or constrain the success of collaborative efforts.

I conclude chapter two with a summary and critique of the dialogic model of public policy. Specifically, I discuss the practical applicability of the dialogic model particularly in relation to Federal land management institutions. Although the dialogic model provides an excellent theoretical framework for evaluating collaborative efforts, it stops short of providing specific guidelines regarding the implementation and structure of specific collaborative initiatives. This is especially true when considering collaboration within Federal bureaucracies, which are social organizations that by definition run counter to the structural transformations needed before the benefits of a dialogic model of public policy can be realized.

Political Ecology

Rather than a formalized theory, political ecology represents a framework for approaching environmental problems and their resolution (e.g., what questions to ask). Regarding its position within broader sociological theory, political ecology is situated within the conflict or critical paradigm. This paradigm frames society as “an arena in which groups fight for power, and the control of conflict simply means that one group is

able, temporarily, to suppress its rivals" (Wallace & Wolff 1999:68). A political ecology approach recognizes the importance of evaluating environmental conflicts in light of a specific historical context. Attention is given to multiple interests, and their historical and current relationships to external actors, political institutions, markets, and national/international policies. Social organizations, such as communities, are viewed as possible sites where differences may be operating. For instance, Belsky (1999:645) notes, "[a] political ecology orientation suggests viewing community as a political arena, grounded in a particular history and constituted through multiple scales and networks of social relations entailing contexts of unequal power."

Weber defines power as the probability that one actor within a social relationship will be in a position to carry out his or her own will despite resistance (Ashley & Orenstein 1998). An individual or group's relative access to power shapes their ability to engage in social action and affect social change. Implied in discussions regarding access to power is the recognition that each individual does not have an equal opportunity for mobilizing the political and economic resources needed to carry out his or her will (unequal power). Rather, "there is a political economic arena in which various people pursue their 'projects' with very unequal access to power in which to pack their own particular knowledge claim and to enroll others into their project" (Blaikie 1995:205). Furthermore, political ecologists recognize that power begets power. In other words, people who lack the political power to influence the course of events are often subordinated or marginalized in other ways (Blaikie 1985).

It is important to note that there are both ideal and material dimensions of power; however, it is debated which, if any, dimension should be privileged as a basis for

explaining the interaction between society and the environment. According to idealists or constructionists, environmental problems, as well as their solutions, are shaped by ideal or symbolic factors, such as culture, ideology, moral values and social experiences (Bell 1998, Burningham & Cooper 1999). Conversely, materialist or realists argue that environmental problems are shaped by material factors, such as consumption, the economy, technology, development, populations and access to biophysical resources (Bell 1998, Burningham & Cooper 1999). Fundamentally, the constructivist-realist debate centers around the following question: does what we see and feel depend upon what we believe, *or* does what we believe depend upon what we see and feel (Bell 1998)? In actuality, however, it may not be a matter of either/or, but a matter of understanding the interaction between the two dimensions (Bell 1998).

Some argue that political ecology is an example of a research approach that bridges the constructivist-realist debate. According to Belsky (1999:645), "[political ecologists] attempt to pay attention to both material and symbolic realms of social action and to examine their interactions with each other and physical places and processes." Political ecologists recognize that ideas matter because they shape how people act on the ground – as they put ideas into action. However, political ecologists also caution against research approaches that focus solely on the ideal dimension of environmental issues (e.g., obtaining an understanding of the multiple social constructions surrounding an aspect of the physical environment). Rather, they argue that researchers must also pay attention to the material context (e.g., bio-physical reality, resource constraints) and how it shapes individual ideas and influences individual actions. In other words, political ecologists note that it is important to demonstrate how struggles over contested meanings

are linked to struggles over material resources (e.g., income, property, water, grazing lands, numbers of cattle, open space, federal jobs and program budgets).

Political ecologists also call for an understanding of the relationship between human agency and social structures, and the consideration of the way in which power is nested within political and economic structures at various scales. Social structures refer to some pre-existing pattern of social relations that may constrain human action or choice (e.g., race, class, gender). Although these structures influence how individuals think, make choices and act on these patterns; individuals themselves are also agents in transforming these structures. Political ecologists recognize that both human agency and social structures are important because each constitutes the other.

For instance, Giddens argue that an accurate understanding of social change requires the integration of micro (agency) and macro (structure) perspectives (Hajer1997; Wallace & Wolf 1999). Rather than categorizing agency and structure as a dualism, they should be viewed as two sides of the same coin (Hajer1997; Wallace & Wolf 1999). In other words, human actors may re-create or seek to transform through their actions the very social practices (and institutions) that in turn enable and constrain their agency (Hajer1997; Wallace & Wolf 1999). It is this interaction between agents and structures that allows for the constant adjustment, transformation, resistance, or re-invention of social arrangements (Hajer 1997; Wallace & Wolf 1999). In turn, it is misleading to think of people as 'free agents' or to only look at the structural constrains that limit individual choices or actions.

Given this underlying assumption, political ecology research relies on the use of 'nested scales of analysis' or a 'bottom-up approach' to research. Such an approach

requires researchers to examine the structural context within which individuals live and work, and make decisions regarding the environment. According to Blaikie (1985:88), "[t]he individual within a household, a household itself, the village or local community, the local bureaucracy, the bureaucracy, government and nature of the states, and finally international relations all represent contexts within which actions affecting. . . conservation take place." Political ecologists note that although it is important to consider local contexts (place-based concerns), it is also important to remain open to a consideration of how social relations that take place far away (non place-based concerns) affect local action. A place based concern addresses both the physical, as well as the socio-cultural, economic and political conditions within a specific location (Blaikie 1985). On the other hand, a non-place based concern addresses the ecological, socio-cultural, economic and political conditions that operate beyond where symptoms of ecological processes are shown (Blaikie 1985).

Guided by a political ecology perspective, the remainder of this section provides an historical overview of decision making at various scales within American government. Specifically, alternative models of public participation within the American political system, as well as within natural resource institutions and policy debates, are compared. Finally, the dialogic model, which is most consistent with a political ecology approach, is outlined as a theoretical model for evaluating collaborative, community based approaches to natural resource management.

National Scale

It is widely accepted that citizen participation within various levels of government is an important goal of our nation's political system. However, there is considerably less agreement regarding the exact role and organization of this participation. Are democratic ideals better reflected by a representative or a participatory government? This question has been debated for centuries. At the national level, two different schools of thought trace their origins to the very founding of American government. On the one hand, there are those who align with a *Federalist* or Madisonian position. This position favors a strong, centralized national government where supreme power resides in a body of citizens entitled to vote and is exercised by elected officials and representatives responsible to them (largely the U.S. model). In other words, the Federalist position supports the adoption of a machinery of government that could develop solutions through the deliberation of representatives elected by citizens, but without direct citizen engagement (Kemmis 1990).

The Jeffersonian model, on the other hand, expects democratic citizens to work out solutions to struggles (Kemmis 1990). Unlike Madison, Jefferson believed democratic ideals could best be realized by active citizen participation in government (Cortner & Moote 1999). In other words, the ultimate powers of society should lie with the people themselves. "[I]f we think them not enlightened enough to exercise their control with wholesome discretion, the remedy is not to take it from them, but to inform their discretion by education" (Jefferson 1821 *as cited in* Cortner & Moote 1999:4).

Institutional or Policy Scale

In addition to understanding concepts of public participation at the scale of the nation's political system, it is important to consider the role and organization of public participation at the institutional or policy level as well. The common thread that runs through the maze of institutions and policies that currently make up the American political system is the fact that they were designed to serve the public interest, as reflected by the problems and political philosophy of a particular time. While serving the public interest represents the common goal of government institutions, the underlying philosophy or models for serving the public interest differ within these structures.

For instance, Williams and Matheny (1995) describe four alternative institutional models (the managerial, the pluralistic, the communitarian, and the dialogic). These models differ in their assumptions regarding central concepts, such as the nature of the public interest (e.g., the homogeneity of the public interest and the scale at which conflicts regarding the public interest should be addressed), the mechanisms for understanding and advancing the public interest (e.g., expert driven decision making versus citizen based learning and deliberation), and discussions of power and opportunities for accessing political and economic resources at multiple scales (e.g., ability of people with divergent truth claims to participate in political processes, to gain equal access to scientific and technical information, and to mobilize resources) (Table 1).

TABLE 1: Comparison Between Four Decision-Making Models (adapted from Williams & Matheny 1995)

MANAGERIAL	PLURALIST	COMMUNITARIAN	DIALOGIC
Nature of the Public Interest Stable set of shared and overarching public values and goals exists outside of policy process (reflecting utilitarianism).	*Nature of the Public Interest* Shared public interest does not exist; individual interests are developed and exist outside of policy process.	*Nature of the Public Interest* A common public interest, linked to a set of communal values and goals, emerges as individuals create and re-create their interests through participation in policy process (communal self-government).	*Nature of the Public Interest* Through dialogue between relevant stakeholders (representing communities of place and interest), individuals realize their own self-interest and the truth about the public interest emerges.
Advancing the Public Interest Technical, problem solving whereby trained experts discover the common interest and then design one best policy to benefit the interests of all.	*Advancing the Public Interest* Creation of open political process that allows contending organized interest equal opportunity to influence public policy.	*Advancing the Public Interest* Engage local citizens (geographically bounded communities) with seemingly conflicting interests in the policy process.	*Advancing the Public Interest* Create forums for housing policy discussions based on the 'dialogic model of rationality;' use science to structure technically complex debates.
Assumptions Regarding Power Reliance on trained bureaucrats, scientists and objective criterion rather than due process and democratic participation.	*Assumptions Regarding Power* National, organized interests granted equal access to policy process; divergent truth claims (including science) considered equally valid.	*Assumptions Regarding Power* Devolve power to residents of geographically bounded communities (communal self-government); dismantle political and economic structures that limit individual freedom.	*Assumptions Regarding Power* Build capacity for achieving collective action; develop vertical and horizontal networks designed to link local action to larger power structures.

Managerial Model

Regarding the nature of the public interest, a managerial perspective (or technocratic approach) assumes that a stable set of shared, and overarching public values and goals exists. Under this model, which emerged during the Progressive Era (1905-1960), the overarching public interest is assumed to be reflective of a utilitarian philosophy. In other words, shared public values such as democratic equality and liberty are not defined as access to political participation or power, but as access to at least a minimal level of comfort and prosperity (Pepperman-Taylor 1992). Under this model, the resolution of social problems (e.g., the protection of the environment, and the governance of public lands) is seen as a technical matter, where trained experts located within bureaucratic organizations work to discover the common public interest and then design the one best policy that furthers the interests of all. In other words, the mechanism for advancing societal goals is technical, expert-driven problem solving. Regarding questions concerning opportunities for accessing power, the managerial perspective is not concerned with issues of due process and democratic participation. Under this model, elected political officials turn to trained bureaucrats and scientists rather than the citizenry to guide environmental policy debates because it is believed that reliance on neutral, objective criteria for judging public policy insulates it against the petty political squabbles of 'uneducated', self interested groups. In other words, the reliance on 'objective' criterion, such as economic efficiency, is seen not only as a "suitable substitute for more democratic decision making but also as more likely to produce policies consistent with the public interest" (Williams & Matheny 1995: 16).

Although a managerial model may have worked well during the Progressive Era,

its ability to navigate postmodern problems, which are characterized by numerous and often competing public values, is limited. According to Williams and Matheny (1995:17), "when competing non-economic values are at stake, objectively defined standards for judging policy alternatives do not exist by definition." Furthermore, even 'objective' standards, such as economic efficiency, do not incorporate the distributive and re-distributive effects of policy decisions. Even though regulatory policies may be utilitarian in nature and provide the 'greatest good for the greatest number,' groups who are forced to bear the costs of these decisions are likely to be disadvantaged and object (Williams & Matheny 1995).

Pluralist Model

The second model of public policy identified by Williams and Matheny (1995) is the pluralist model. Regarding the nature of the public interest, the pluralist perspective does not assume that a homogeneous set of public values and goals exists. As a result, elected officials and experts cannot determine the common public interest and create the 'best' policy through technical problem solving. Rather, the mechanism for achieving social goals is the creation of an open political process that allows contending organized interests equal opportunity to influence public policy. Resulting policies, then, reflect the balance between the vectors of political pressure brought to bear by organized groups. Regarding questions concerning opportunities for accessing power, a pluralist perspective grants organized interests equal opportunity to participate in the policy making process. Within this perspective, science is seen as one of many claims to truth representing one set of interests because supporters of the pluralist model believe that the structural

realities of American politics (e.g., distribution of knowledge, power and resources) prohibit expertise from ever truly being an independent, neutral guide to decision making.

One of the shortcomings of the pluralist model is that it assumes equality of opportunity, political equality, and freedom (Williams & Matheny 1995). It posits that open political processes equate to fair processes; however, in actuality, unequal distributions of political and economic power distort the actions of government. Second, since economic resources often translate into political power, groups that are marginalized economically are often marginalized politically as well. Furthermore, the scientific and technical complexity of environmental problems also "creates barriers to participation because access to such information is a pre-requisite to understanding one's interests" (Williams & Matheny 1995: 24). In summary, the pluralist model assumes that all interests are equally able to participate in policy decisions and that the absence of participation implies consensus. In actuality, however, this is not necessarily the case.

Communitarian Model

Williams and Mathney's (1995) third model of public policy, the communitarian model, rests on the assumption that a common public interest, which is linked to a set of communal or shared values and goals, can be created through the workings of an enlightened citizenry that governs on its own behalf. It is assumed that by returning government to the people, conflicts of interest will disappear in the process of communal self-government. Reflecting a Jeffersonian philosophy, the communitarian perspective posits that American democracy should avoid large, strong government or private institutions. Rather than delegating decision making authority to such institutions, the

means for achieving societal goals is by creating mechanisms that allow citizens to rule more directly. With regard to questions concerning access to power, a communitarian perspective supports the dismantling of political and economic structures that limit individual freedom. In sum, the communitarian perspective strives to devolve power to the residents of geographically bounded communities who often bear the immediate effects of public policy decisions.

Although the communitarian perspective represents a note-worthy break from the traditional dichotomy of managerial versus pluralist models of public policy, it has some significant drawbacks as well. First, the perspective's appeal to a set of values (e.g., family, religion, community) that are seemingly threatened by modernization and technological progress has made it difficult to incorporate sophisticated scientific and technical knowledge within such a decision making process. Second, the communitarian perspective treats society and community as if they were distinct and opposite categories (dualisms) rather than nested scales that influence one another (two sides of the same coin). As a result, it fails to specify the institutional mechanisms through which local action can be integrated into the broader political economy.

Dialogic Model

Although Williams and Matheny (1995) present the pluralist, managerial, and communitarian models as distinct models of public policy, they argue that, in actuality, it is impossible for any one of these models to capture the dynamics of complex social phenomena. In turn, they promote a fourth model, the 'dialogic', as a way to promote meaningful, democratic participation in policy debates (institutional scale). The dialogic

model draws heavily upon the decision-making framework outlined in the communitarian model. However, the overall goal of the dialogic model is to transform local and Federal structures and create local institutions (supported by Federal institutions) that are capable of housing forums for democratic dialogue where competing interests can clarify and resolve the disparate assumptions of the different models through dialogue. In the remainder of this section, I outline the assumptions underlying the dialogic model of public policy and compare it to the three alternative models previously discussed.

Nature of the Public Interest

As previously stated, the managerial model portrays society as a stable, integrated whole that rests on shared norms and values (common public interest) (Table 1). Both the pluralist and the communitarian models, on the other hand, disagree with this portrayal of society. The assumptions underlying the pluralist and communitarian models are more closely aligned with the philosophical commitments shared by conflict theorists or political ecologists (see Ilbery 1998, Agrawal & Gibson 1999, Peet & Watts 1996). As previously noted, individuals who align with a conflict perspective see the parts of society as being in tension or competition, rather than an integrated whole. Additionally, they do not believe that society is stable and based on shared interests, instead they argue that society is characterized by frequent change borne out of a struggle over the distribution of power.

Although both the pluralist and communitarian models are similar in the way they view society and social change, they do differ on two important points. First, the pluralist model assumes that individual interests are not only stable, but they develop and exist

outside the policy process. The communitarian model, on the other hand, posits that individual interests are created and re-defined through direct engagement in the policy process because it is through this process that individuals truly come to understand their self-interest. This is reflective of a central component of critical theory (important theoretical foundation of political ecology), which is focused on exposing reification (how domination and authority are institutionalized within communicative interaction) through a reliance on 'transparent' language and social interaction as a way to reveal how human constructed events, institutions and meanings are not inevitable (Ashley and Orenstein 1998).

The second point on which these two models differ is in their consideration of scale. The pluralist model assumes that nationally organized interest groups effectively represent the interests of citizens within geographically bounded communities. As a result, adherents to this model believe that it is acceptable for the policy process to continue to occur at the national scale. The communitarian model, on the other hand, suggests that people within geographically bounded communities have a single set of interests (which have been traditionally ignored by larger political and economic institutions). Supporters of the communitarian model believe that these interests can only be discovered by directly engaging local people who hold divergent and conflicting interests within the policy process. In turn, they advocate for the devolution of the policy process to a more local scale. Both the pluralist and the communitarian models run counter to political ecology in this regard because neither model incorporates both place-based and non place-based concerns (nested scales).

Regarding the nature of the public interest, the dialogic model aligns most closely with the communitarian model. First, supporters of the dialogic model (like political ecologists) believe that conflict is an important component of community building. As a result, the goal of a dialogic policy process is not to reduce or dispel conflict, but to provide a forum in which people can learn to effectively and democratically manage disagreement and controversy. Second, supporters of the dialogic model argue that truth about the public interest emerges from open dialogue among participants within the policy process. This represents an important distinction from both the managerial and the pluralist models because it assumes that individual interests do not exist outside the policy process, rather it is through participation in this process that individuals come to truly understand their interests (as well as the interests of others). In turn, scientists and bureaucrats cannot identify these interests a priori (managerial model) nor can leaders of national interest groups capture the concerns of local citizens (pluralist model). Rather, it is only through participating in the policy process that individual citizens can understand and represent their interests to a larger political entity.

The dialogic model differs from the communitarian model, however, in its consideration of scale. Supporters of the dialogic model recognize that when environmental issues are at hand, it is not enough to operate only at the scale of a particular geographically bounded community because the implications of such policy decisions often extend beyond one community – and often pit one community against another. Therefore, when dealing with issues such as natural resource management on public lands, it is important to incorporate both communities of interest as well as place (Duane 1997). Communities of interest refer to people who share commonalities in how

they relate to a particular ecosystem or resource, though they are not geographically bounded (Duane 1997, Cestero 1999). Communities of place, on the other hand, are united through the specific geographic locale within which they are situated, and their common interest lies in the need for finding within a shared space the possibilities for shared inhabitation (Kemmis 1990).

Mechanisms for Understanding and Advancing the Public Interest

Regarding the mechanism for understanding and advancing the public interest, the managerial model advocates scientific and technical problem solving as a means to discover the common public interest and create policies that advance the interests of all (Table 1). The pluralist model, on the other hand, posits that a single common public interest does not exist and, therefore, cannot be discovered by trained experts. Rather, the mechanism for advancing the public interest is creation of forums that allow for the development of policies that balance competing interests. Finally, the communitarian model assumes that a common public interest can only be created through the active participation of local citizens in government. Supporters of the communitarian model believe that it is through mutual exchange and learning that individuals are able to fully realize their own self-interest and create policies that work to advance the interests of all who reside within a particular place.

In order to truly understand the differences between the various mechanisms advocated by the different models of decision making, it is important to evaluate the epistemological commitments underlying these models. The term ‘epistemology’ refers

to assumptions about the ways we can obtain knowledge. At one extreme, the managerial model falls assumes a rationalist or objectivist position, which posits that an objective reality, or **T**ruth, exists and is knowable only to scientifically trained experts (Williams & Matheny 1995). At the other extreme, the pluralist model assumes a relativist position, which posits that all truth claims, including scientific claims, are equally valid (and equally heard) (Williams & Matheny 1995). Finally, the communitarian model, with its discussions of a 'politically relevant truth', falls in between those two extremes (Williams & Matheny 1995). In other words, supporters of the communitarian perspective argue that there is a middle ground between extreme rationalism and extreme relativism.

This latter belief is also shared by some political ecologists, such as Blaikie (1996), who argue that although one **T**ruth does not exist (there are multiple ways of knowing the world) it is important to guard against 'uncritical pluralism' or the belief that different truth claims are equally valid. As noted in Burningham & Cooper (1999), many theorists (e.g., 'weak' social constructionists) argue that individual truth claims are not equally valid because there is a bio-physicial and socio-economic reality against which the validity of alternative truth claims can be measured. Although these theorists recognize that all knowledge is in some sense a social construction (because there is not absolute truth); they also recognize that there are features of the world that exist independent of discourse and social construction (Burningham & Cooper 1999). Similarly, Blaikie (1996) warns against replacing the structural[1] approach to reality with the notion that all reality is socially constructed, because then the ability to reconcile

[1] A structural approach assumes that there is an objective world whose essence can be reliably measured by different observers with the same result (Blaikie 1995).

differences between knowledge claims (through the use of empirical testing as an arbitrator of whose narrative is correct, or even credible) is lost (Blaikie 1996).

A reliance on a critical pluralist perspective, as advocated by political ecologists, does not mean that individuals with divergent truth claims do not have the right to be given a voice in the policy process (as a managerial perspective would have you believe). Rather, it sets the stage for the creation of a learning environment where the assumptions underlying competing world views can be negotiated and relationships among individuals can be developed (which is lacking in the pluralist model). Critical to the creation of this learning environment is the maintenance of a privileged role for science, broadly defined, and scientists (natural scientists, as well as sociologists) within natural resource policy debates. It is in the discussion of science that both political ecologists and supporters of the dialogic model stand in contrast to supporters of the communitarian model, who have historically been unable to embrace and incorporate scientific and technical information within policy debates (Williams & Matheny 1995).

In addition to providing factual and technical information related to the bio-physical world, political ecologists believe that the role of science is to demonstrate how the selective identification and representation of environmental problems is a political process that reflects and often reinforces social and economic inequalities in so far as knowledge claims may be used as the basis of socially divisive public policy (Bryant 1998). Although it is important to accommodate non-technical optics and the views they produce, simply listing or describing the different ways that people view landscapes and enter into discourses about them does not put the various actors into the field of social relations (Balikie 1995). Political ecologists argue that when researching environmental

claims it is important to ask where a claim comes from, who owns or manages it, what economic and political interests claim makers represent and what type of resources they bring to the claims making process, and who benefits and loses. Blaikie (1995) suggests a three step approach: (1) identify multiple views; (2) situate actors within their daily lives; and (3) recognize that social relations occur on a playing field that is anything but level. In other words, it is important to recognize that the political playing field is influenced by structures of power (e.g., racism, classism, sexism) at all levels (local-global), which limits some and expands others' opportunities (Blaikie 1995).

When compared to the alternative models of public policy presented by Williams and Matheny (1995), the dialogic model aligns most closely with the communitarian model's description of the mechanisms for understanding and advancing the public interest. However, supporters of the dialogic model, like political ecologists, place greater emphasis on the need to provide participants with opportunities for incorporating science, both as a thought process and as a way to obtain factual information about a bio-physical and soci-economic reality, than do supporters of the communitarian model. Stated more specifically, supporters of the dialogic model look to science as a way to structure policy debates. The role of science within this debate is not to provide answers or resolve conflicts; rather, it is to foster the debate in such a way that the assumptions and interests underlying contested world views can be evaluated by participants (Williams & Matheny 1995). It is through this type of an exchange, where equally informed opponents (created through efforts aimed at educating participants with regard to the risks and tradeoffs associated with specific environmental decisions) are able to participate openly in policy

debates, that the truth about the public interest emerges - what Williams and Matheny (1995) refer to as the 'dialogic model of rationality'

Williams and Matheny's (1995) discussion of a 'dialogic model of rationality' is similar to Habermas' notion of communicative rationality (Duane 1997, Williams & Matheny 1995, Wallace & Wolf 1999). Habermas posits that if participants are able to converse/interact under the conditions of 'ideal speech' (which means that power is distributed among the group in terms of each individual having an equal voice - as opposed to more prestigious or uninhibited people having more say), then agreement will be achieved through the use of reason (Wallace & Wolf 1999). This agreement is based on recognition of the corresponding validity claims of comprehensibility, truth, truthfulness, and rightness; and it occurs through the development of reciprocal understanding, shared knowledge, and mutual trust and accord among participants (Habermas 1979 *as cited in* Wallace & Wolff 1999:178).

Judith Innes argues that agreement is achieved through such dialogue because participants gain 'emancipatory knowledge', or "knowledge of the deeper reality hidden beneath popular myths, scientific theories, and the arguments and rationalization in common use. Such knowledge can come through dialectic, self-reflection, praxis (the broad and deep experience of those who know how to do things in the world) and from discourse that challenges prevailing assumptions" (*as cited in* Duane 1997:773). Thus, the creation of mutual understanding or emancipatory knowledge occurs through 'active experiential learning', which is at least in theory both an adaptive and transformative

process that continuously creates knowledge and assigns meaning to it (Kolb 1984 *as cited in* Daniels & Walker 1996).

Daniels and Walker (1996) use the term 'collaborative learning' to describe forums that provide opportunities to create shared knowledge and develop mutual trust. They argue that one of the major shortcomings of policy making within the natural resource arena has been agencies' inability to design decision making strategies designed to enable participants to share, validate and integrate different types of knowledge (e.g., science, local knowledge) through civic dialogue and collaborative learning (Daniels & Walker 1996). "To be effective, public deliberation needs more than public information; it requires forums that encourage social learning" (Daniels & Walker 1996:74). Daniels and Walker (1996) also note that before social learning can occur, participants must develop competent communication skills. These skills aid in sustaining quality discussions thereby providing participants with opportunities to better understand the situation, to draw upon their experience and contribute local knowledge, to discover areas of agreement and disagreement, to negotiate, and to develop tangible improvements (Daniels & Walker 1996). Studies show that face-to-face communication consistently enhances cooperation in response to social dilemmas (collective action) because it enables participants to exchange mutual commitment, increase trust, create and reinforce norms, and develop a group identity (Ostrom 1998).

Linking Local Action to Larger Power Structures and Institutions

Supporters of the managerial model believe that the power to affect public policy

should lie in the hands of elite members of society (e.g., elected officials, scientific experts, trained bureaucrats, and the occasional educated citizen), rather than in the hands of organized interests (pluralist model) or ordinary citizens (communitarian model) (Table 1). In contrast, supporters of the dialogic model posit that it is necessary to distribute power equally among all participants - experts, as well as non-technically trained individuals from various communities of interest and place - within the policy process or dialogue. In other words, the dialogic model advocates for the creation of a forum where dialogue can occur in an ideal speech situation, as defined by Habermas (Wallace & Wolff 1999).

Williams and Matheny's (1995) description of the dialogic model of public policy goes beyond the creation of forums for communication and the achievement of a shared understanding or rationality, to a discussion of the need for local action as a means to resolve many of the environmental problems facing society today. In other words, the desired end of the creation of forums capable of housing democratic dialogue is the empowerment of local communities to design and implement creative policy solutions to environmental problems - not to simply discuss them (Daniels & Walker 1996, Williams & Matheny 1995).

As previously note, supporters of the dialogic model (and political ecologists), view conflict, or struggles over the distribution of power and resources, as the driving force of social change. As a result, they argue that both attitudinal and structural changes are required before society can be re-created or transformed (Williams & Matheny 1995). In other words, the ability to achieve local action is dependent upon both the creation of a common identity (with regard to a specific issue) and the mobilization of resources

(DeLuca 1999, Marsden 1998, Peet & Watts 1996, Bell 1998, Marsden et al 1990). As a result, supporters of the dialogic model do not simply call for a return to localism - as is the case with supporters of the communitarian model. Rather, implicit within the dialogic model is the assumption that local action, in order to be effective, must be linked to structures of political and economic power at multiple scales.

Just as it is important to recognize that all actors (both participating and non-participating) within a policy process or dialogue bring with them differing levels of political and economic power, it is also important to recognize that the capacity of a group of stakeholders to engage in local action is related to the existence of multiple forms of capital (natural, financial, human and social) within a locality. Whereas supporters of the communitarian model typically focus on the creation and maintenance of social capital, supporters of the dialogic model (and political ecologists) stress the importance of evaluating the proportion and relationship between various types of capital, as well as the socio-economic context within which alternative forms of capital are positioned.

Many theorists who study rural communities argue that community capacity (ability to adapt to and act upon social and economic pressures) or well-being is not directly correlated with any one particular form of capital. For instance, Gallagher (1999:19) notes that “natural capital may not be accessible without sufficient human and social capital to maintain it.” Similarly, Edwards and Foley (1997) argue that higher levels of human capital often translate into higher levels of financial capital, as well as social capital. "Increased educational attainment generally enables one to experience more diverse social relations and gain access to wider networks of weak ties (explained

below) than their former peers who went directly from high school to full-time employment" (Edwards & Foley 1997:672). This last comment highlights not only the need to consider multiple forms of capital, but also to consider the nature of the relationship between alternative forms of capital and the presence of linkages at scales beyond a specific community.

Regarding the nature of relationships, the term 'weak ties' refers to the contacts among strangers (casual, short-lived and superficial relations), while 'strong ties' refer to permanent, strong and durable relations (Granovetter 1973 *as cited in* Wilkinson 1991). Similarly, 'horizontal linkages' bring together agents of equivalent status and power, while vertical linkages connect unequal agents in asymmetrical relations of hierarchy and dependence (Putnam 1993, Duane 1997). The tendency of communitarian supporters is to focus on the creation and maintenance of horizontal linkages, because they are more likely to foster civic engagement. According to Putnam (1993:174), "a vertical network, no matter how dense or important to participants, cannot sustain social trust and cooperation." Although the maintenance of strong or dense horizontal linkages is necessary for the development of politically engaged communities, supporters of the dialogic model caution against disregarding the importance of weak ties to structures of power that exist outside the community (vertical linkages) as well. In other words, a diverse number of weak ties are just as important as dense networks of strong ties.

However, members of rural communities often have a number of strong ties, but a decided shortage of weak ties, because of their limited contact with people and

institutions that fall outside their geographical boundary.[2] According to Wilkinson (1991:86), "if rural life depresses weak ties as argued, then rural life also can be identified as a constraint to upward mobility and to reducing inequality, which clearly is a stumbling block for community development." Similarly, Flora and Flora (2000) argue that although there may be high levels of social capital existing within rural communities, cutting off communication and acceptance of outsiders results in a 'we-they' identity, where social capital is maintained at the expense of opportunity for investment in other community capitals.

Finally, the capacity of a community to affect change is affected by the socio-economic context within which alternative forms of capital are nested. For instance, Edwards and Foley (1997:677) argue that "the reserves of social capital that are available to facilitate all sorts of individual and collective actions are unevenly distributed and differently accessible." "Some social capital is nested within sectors of society that are expanding and prospering, and others are tied to declining sectors" (Edwards & Foley 1997:673).

In communities where existing levels of community capacity for collective action are low, it must be built through linkages to external structures of power at larger scales. For instance, Duane (1997:778) notes that

> formal institutions, such as governments, are not enough; we must also engage 'civil society' to transcend formal *governments* in our efforts at *governance*. The critical challenge is to design and implement institutional structures in which the proper relationships between horizontal and vertical networks can enhance our capacity for collective action.

[2] This trend may be decreasing, however, with the invention of new technologies, such as the internet, which work to increase the permeability of such boundaries.

Similarly, Williams and Matheny (1995) argue that political and economic structures must be rearranged to protect the environment and nurture democratic communities.

Again, this view is very different from the view held by individuals who support the communitarian model of public policy. One of the primary characteristics of the communitarian model of decision making is that it strives to shift the power for affecting public policy from the top (governments, institutions, experts, and organized interests) to the bottom (local communities) (Cestero 1999, Strum 1994). However, both political ecologists and supporters of the dialogic model argue that the success of community-based efforts requires more than romanticizing the local. "[S]hifting the focus of decisions and the locus of action from the top to the bottom by empowering local communities does not guarantee success. This shift usually introduces problems of scale" (Strum 1994:518). In order to be effective, local action must be linked to the larger networks of power and policy (e.g., supportive linkages between a variety of institutions at multiple levels including national, regional, local and community) (Strum 1994, Wright 1994).

Although it is imperative to scale up from the community level to higher levels, the challenge is to maintain the integrity of community goals and aspirations in the process (Strum 1994). According to Murphee (1994:404), "by definition, community-based conservation (place-based conservation, similar to dialogic model of public policy described above) must be of, by, and for the community. Such a configuration is likely to involve different motives and objectives (and methods) than those of externally derived interventions." Similarly, Wright (1994:532) argues,

> If activities are truly community led, [outsiders] should not have a vested interest in pushing any activity in a predetermined direction. They should support people, institutions, and processes rather than projects, including social and cultural as well as economic objectives, against which the activity will be evaluated.

Many suggest that rather than pursuing their own objectives, government, institutions and scientists should think in terms of integrating the activities of many groups and individuals by organizing their activities around place as much as possible (e.g., be more responsive to local ideas and proposals, become an active participant in local dialogue) (Western 1994, John & Mlay 1999).

Given the structural limitations of state and local governments, effective democracy and dialogue at the community level is important, but "can only occur if the federal government acts to overcome the obstacles to organization, information gathering and effective participation in policy [and decision] making that face citizens. ...It is toward this task that federal efforts need to be directed" (Williams & Matheny 1995:78). In other words, there should be top-down support for the often ad hoc process of local problem solving and decision-making (John & Mlay 1999, Williams & Matheny 195). The federal government must support such political processes through the redistribution of political and economic power. For instance, the Federal government assist by gathering data or technical information, conducting new research, lending the expertise of their technical staffs, and perhaps financing the planning process and paying the fees of facilitators or mediators (Williams & Matheny 1995, John & Mlay 1999, Wright 1994, Western et al 1994, Seymour 1994, Coortner & Moote 1999, Bell 1998).

Historical Overview: Natural Resource Decision-Making

The following section outlines the historical evolution of decision making within natural resource institutions as it relates to the larger models of public policy outlined above. With respect to natural resource management, institutional decision making falls into three distinct phases: Progressive era management (1905-1960), NEPA based management (1960-1990), and Ecosystem management (1990-present). Each phase is characterized by not only a different model of decision-making, but a shift in the underlying philosophy regarding the role of public participation in policy making as well.

Progressive Era Management

In the early 20th century, natural resource policy and management was guided by a managerial perspective. This perspective assumed that the scientific management of our nation's resources, guided by a utilitarian philosophy, was the best mechanism for advancing the common public interest. Thus, the scientific management of natural resources was seen as a means to protect equality of opportunity through the development and conservation of natural resources for the benefits of the many, rather than the profit of a few (Pepperman-Taylor 1992). This model worked well for the first half of the 20th century, which was characterized by the rapid organization and industrialization of the U.S. During this time period, the 'American dream' (material wealth and prosperity) was a goal shared by many. As a result, reliance on economic efficiency as a criterion for judging alternative policies was seen as a means of producing natural resource policies

that were consistent with the common public interest.[3]

By the 1960's, however, various factors converged that led the American public to challenge a managerial approach to natural resource policy making. First, as evidenced by the growing environmental movement, societal goals and values concerning the environment began to shift away from the ideals of utilitarianism (e.g., materialism, efficiency, and wealth) toward a concern for more diverse, non-economic goals such as environmental quality (Cortner & Moote 1999, Dana & Fairfax 1980). Additionally, public distrust of scientists, trained experts and government bureaucracies was increasing (Cortner & Moote 1999). As a result, the National Environmental Policy Act (NEPA) was passed. This Act laid out a framework for incorporating public participation into federal decision making when the decision in question could significantly alter the environment, and "raised broad possibilities for litigation by the provision for environmental impact statements" (Dana & Fairfax 1980:237). The passage of NEPA marks the emergence of the second era decision making within natural resource institutions in the U.S.

NEPA-Based Management

In theory, NEPA based resource management represented a shift away from a managerial approach to public policy. Specifically, it countered the notion that a homogenous public interest exists and established a framework for incorporating multiple interests and truth claims within policy debates. However, many argue that agency

[3] For instance, the Forest Service traditionally focused on providing community stability through the extraction and sale of natural resources, such as timber and ore. It was not until much later that policy

implementation was still reflective of Progressive Era management (Duane 1997, Smith 1999, Cortner & Moote 1999, McKinney 1988). Philosophically, trained experts located within land management bureaucracies were still committed to the belief that they had the ability to design the right or best policies that promoted the public interest. This belief manifested itself in two ways: (1) the continued delegation of decision making authority to experts through a reliance on a 'decide, announce, defend' model of public participation, and (2) the continued support of citizen or public education as a means to achieve policy consensus. Progressive Era management supporters argue that since an adequate understanding of appropriate analytical techniques is required before sound policies can be created, the public must be 'properly educated' (technical training) before it is asked to participate (Williams & Matheny 1995). This perspective was carried over into the era of NEPA-Based Management.

Under NEPA based processes, community participation in natural resource decision making follows the formalized requirements of administrative law; however, Duane (1997) contends that, in reality, agencies practice a mere 'tokenism' in these highly formalized processes. The 'decide, announce, defend' model of public participation characteristic under NEPA - in which an agency crafts a proposal, drafts the analysis, and presents it to the public for comment - is, in effect, an after-the-fact public review of decisions already made by 'neutral' agency officials rather than by substantive public involvement in the decision making process (Duane 1997, Cestero 1999). Although decision makers solicit public input, they often evaluate and incorporate it into

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makers began to recognize community stability conceptually could not be described solely in economic terms (see Fortman et al 1989).

their decisions on their own (McKinney 1988). This presents a problem because value judgements and resource tradeoffs are made in each step of the process; however, individuals and organizations rarely have the opportunity to participate directly in the decision making process, to clarify or expand on their concerns, or to correct inappropriate responses to the issues they raised (McKinney 1988).

> "Under the claim of professionalism and objectivism, experts convey an image that they are not involved in politics or decisions involving values, all the while making decisions reflecting their own professional values and definitions of the public interest" (Cortner & Moote 1999:16-17).

In addition to the continuing belief that technically trained experts can design policies that promote the public interest, land management agencies have also continued to provide strong support for using education as a means to achieve policy consensus. In other words, land management agencies have operated under the premise that if enough scientifically based information is provided to the public they will eventually reach agreement (Smith 1999). Daniels and Walker (1996:73) argue,

> "[a] phrase common among natural resource professionals is that 'if the public only knew what we know, they would agree with us; how can they be taught what we are doing is right?' Such a statement...is based on the presumption that the worldview of the agency professional is both fully informed and somehow 'right'; therefore, the only participants needing to learn are the public."

As a result of this mind-set, agency approaches to public participation have focused on information gathering and dissemination, rather than designing activities to promote social learning among diverse groups (Daniels & Walker 1996).

In summary, despite the institutionalization of new mechanisms for public participation during the era of NEPA-Based management government agencies have continued to operate under a managerial, expert-agency driven model of decision making

(Smith 1999). As a result of the inability of agency officials to make a philosophical and practical break from the assumptions underlying a managerial approach to public policy, there has been widespread public dissatisfaction with both the decision making process and its outcomes (McKinney 1988). This adversarial relationship has been expressed by contentious public hearings and significant detours to the courts and Congress, in which distrustful interest groups and citizens monitor bureaucracies they believe are making poor decisions (Cestero 1999). These conflicts have resulted in gridlock on the ground, and limited resources for the development and implementation of creative solutions to natural resource problems. In short, public participation within the natural resource arena has been reduced to a struggle between competing organized interests (pluralist model) – as different parties battle it out in the judicial and legislative arenas.

Although agencies continued to operate under a managerial model, the actual outcomes have reflected a pluralist philosophy. Under the era of NEPA-Based management resource questions were no longer deferred to scientific experts working to achieve the common good, nor were they debated among individuals. Rather, such questions were relegated to the courts and legislature where decisions were influenced by the relative political and economic power of various organized interests. When it comes to natural resource management, any decision including a no-action decision, brings with it questions regarding the distribution and re-distribution of risks or costs. An unfortunate result of the pluralist policy model, as applied to natural resources, was that the costs of these decisions were most often shouldered by local, often political and economically marginalized, individuals and communities. In response to this situation, there has recently been a surge of grassroots, place-based, citizen efforts aimed at creating

alternative forums for natural resource decision-making and management.

Ecosystem Management

In attempt to address the problems associated with NEPA-Based Management, a third era of institutional decision making is emerging. This era is frequently referred to as Ecosystem Management. According to Cortner & Moote (1999:20), the philosophy of ecosystem management is premised on three central themes: "(1) a concern for the health of ecosystems; (2) a preference for both landscape-scale and decentralized decision making; and (3) a new kind of public participation integrating civic discourse into decision making." In short, Ecosystem Management supporters believe that common visions and creative approaches for managing the landscape can be created through the encouragement of democratic dialogue among affected people.

Implicit within an Ecosystem Management philosophy is the assumption that one homogeneous, overarching public interest does not exist (Wondolleck & Yaffee 2000). Additionally, there is a recognition that many scientific concepts, including the definition of an ecosystem and criteria for healthy ecosystems, are essentially value judgements (Cortner & Moote 1999). In other words, the ecosystem management framework suggests that there is no single right answer to the question of how to manage a landscape; rather, different decisions benefit interests in divergent ways (Wondolleck & Yaffee 2000). Finally, the philosophy of Ecosystem Management recognizes the importance of giving a political voice to geographically bounded communities (located near or adjacent to natural resources and whose livelihoods depend upon these resources) because they may have access to local ecological knowledge and they frequently bear the

immediate costs of management decisions. By definition, ecosystem management requires cross-jurisdictional perspectives and action (Cortner & Moote 1999).

An ecosystem management philosophy reflects the realization that land management is not merely applied science but a complex public policy debate as well (Daniels & Walker 1996). In turn, the mechanism for achieving societal goals can no longer be simply technical-rational problem solving (or confined to managerial paradigm), because it does a poor job of solving problems rooted in value conflicts (Primm 1995). "Technology can help inform decisions by improving the identification and monitoring of resources, but it is not a substitute for decision making" (Ostrom et al 1999:28). In order to build understanding and support for decisions, the interests and values of an array of individuals and groups must be incorporated (McKinney 1988, Wondolleck & Yaffee 2000). According to Wondolleck and Yaffee (2000:31),

> "[i]nvolving stakeholders in forums designed to share knowledge, express concerns, build relationships, establish trust and encourage creative problem solving is more likely to produce this kind of decision making than is a traditional process in which experts retreat to closed rooms to make choices that only they feel are best....Even when the ultimate decisions are the same, people need the opportunity to engage as partners in the decision making process so that they take ownership of the outcomes."

In short, the execution of an ecosystem management regime requires not only a shift in the process through which land management decisions are made - from expert-driven to collaborative, but a shift in the underlying natural resource and political philosophies as well.

Collaborative Decision-Making

Collaboration means different things to different people. Coggins (1998) argues that the terms collaboration, community, dialogue and consensus are joining the list of other undefinable, if not undecipherable, buzzwords within Federal land management policy circles. Given the ambiguity associated with the concept of collaboration, it is important to outline a framework for understanding. Drawing on the dialogic model presented by Williams and Matheny (1995), I discuss collaboration both in terms of creating forums for democratic dialogue and situating this dialogue, and resulting local action, within broader political and economic structures (consistent with political ecology perspective). This framework will ultimately provide a basis for describing and evaluating the 'Initiative for Accelerating Cooperative Riparian Restoration and Management.'

Ecosystem management and collaborative decision-making represent an alternative to NEPA-based management and reliance on a pluralist model of decision-making. Whereas NEPA-based management relegated natural resource decision-making to organized interests at the national level, collaborative decision-making advocates for the participation of both organized, national interests and unorganized, local citizens. Such consideration of scale differentiates the dialogic model of collaboration from a communitarian perspective. Unlike the dialogic's focus on nesting local concerns and activity within larger political and economic structures or context (consistent with political ecology), a communitarian model of collaboration calls for the devolution of decision-making and authority to the local level. As previously noted, Williams and Matheny (1995) argue that such a model is fatally flawed in its ability to address natural

resource issues and empower local, resource dependent communities.

A second notable difference between these models of collaboration is the dialogic model's privileged role for science and technical information. Unlike the pluralist model, which considers science as an interest that is equal to all other interests and the communitarian model, which advocates for a turning away from science and technology, the dialogic model embraces scientific and technical information. First, supporters of the dialogic model argue that it is important for participants to have access to scientific and technical information (bio-physical and social science) because it enables them to have a more complete understanding of the issues and better formulation of individual interests. Second, the dialogic model relies on the scientific process and learning as a means for structuring natural resource debates. In all instances, the approach defined the terms 'science and technical information' broadly and includes (and validates) western science, as well as indigenous, traditional and local knowledge.

Given the newness of concepts such as 'ecosystem management' and 'collaborative decision-making' to the field of natural resource management, there have not been many empirical studies that evaluate if individuals within land management institutions are able to break away from traditional decision-making models (managerial, pluralist) and embrace these concepts. It is also yet to be seen whether collaborative approaches will be modeled after a communitarian or dialogic perspective. In the interim, however, as the underlying philosophical context slowly shifts, there are a number of experiments in collaborative decision-making currently underway. Initial studies of these efforts have resulted in the creation of a set of literature addressing outcomes, as well as factors that facilitate and constrain the success of collaborative

approaches. The remainder of this section provides an overview of such factors.

Situation specific factors that promote collaboration include: perceived interdependence of stakeholders, shared and super-ordinate goals, sense of crisis, sense of place, personal relationships, trust and respect, public interest/pressure, and agreement that problem cannot be solved with public participation (Yaffee et al 1997, McCool & Guthrie 1998, Toupal & Johnson 1998). Those factors that constrain collaboration include: power imbalances, lack of communication/chemistry/ trust, technical and scientific issues, public opposition to collaborative approaches, and fundamental differences that separate stakeholders - such as different definitions of success among participants (e.g., scientists, managers, and members of the public) (Yaffee et al 1997, McCool & Guthrie 1998, Toupal & Johnson 1998).

In addition to situation specific factors, there are also institutional factors that facilitate collaboration, including: opportunities for interaction, incentives, resources, technology, and agency ability to act on decisions (Yaffee et al 1997, McCool & Guthrie 1998). On the other hand, conflicting agency goals and missions, organizational norms and culture, lack of top-level support for collaboration, resource constraints, government policies and procedures, differing decision-making authority among participants, and inadequate opportunities for interaction are examples of institutional factors that constrain collaboration (Yaffee et al 1997).

A third category of factors that influence the success of collaborative efforts are process related factors. Process related factors that facilitate collaboration include; active participation by a wide variety and large number of stakeholders, use of an inclusive and adaptable problem-solving processes (e.g., consensus building), information sharing and

joint fact finding/problem definition, process management/interpersonal skills, individual dedication, existence of flexible leadership, early small successes, clear/consistent/regular communication, and a sense of fairness/equity/ burden sharing/ownership/responsibility (Yaffee et al 1997, McCool & Guthrie 1998, Toupal & Johnson 1998). Process related factors that constrain collaborative efforts include; lack of focus on process, lack of process management or interpersonal skills, resistance to collaborative management styles, and difficulty securing the involvement of all stakeholders (Yaffee et al 1997, McCool & Guthrie 1998).

In addition to the process dimension of collaboration, McCool and Guthrie (1998) note that there is also an outcome dimension (social/political acceptability and implementation of the plan) of collaboration that can be used to indicate the success of such efforts. Although situational, institutional and process related factors all influence whether a collaborative plan is designed and implemented to some degree, the social context within which these plans are created may be the biggest determinant of whether a collaborative effort is a success based on the outcome. Social factors that constrain collaborative efforts include: cultural norms, stereotypes and intergroup attitudes, polarization arising from traditional process, opposition by public interest groups, and politics.

Discussion

To summarize, the goal of the dialogic model of public policy is to bring people together in an attempt to discover a common public interest through the creation of local

(or place-based) forums for dialogue that are capable of housing the 'dialogic model of rationality.' Such forums require the up-front participation of all relevant stakeholders from communities of interest and place. In other words, they include a broad range of local citizens as well as leaders of existing national interest groups. These forums also incorporate science both as a way of providing technical information about a bio-physical reality and a method for structuring debates. Finally, these forums incorporate discussions regarding the costs and benefits, including the risks and tradeoffs, associated with alternative environmental decisions (and the distribution of these costs and benefits across individuals or groups).

Williams and Matheny (1995) advocate for a decentralized approach to creating new structures of democratic participation whereby state and local governments find ways to proactively engage citizens and interest groups in an on-going public discussion. However, they also note that the reforms necessary to reach a 'democratic vision' at the local level are far-reaching and interconnected. Williams and Matheny (1995) argue the ability of local governments to create forums capable of the dialogic model of public policy is questionable under current system of Federalism. In response, they argue that the Federal government must reinvent ways of giving states and localities the legal mandates and financial resources to overcome existing structural limitations.

According to Williams and Matheny (1995), the Federal government must work to change existing centralized arrangements or relations between the market, state and democratic institutions to protect the environment and nurture democracy. In short, the Federal government must begin to reshape its policies and structures, which have

historically favored capitalism over democracy (Williams & Matheny 1995). One way the Federal government can begin to favor democracy is by shifting the burden of risk (e.g., toxic waste issues) from local communities to private industry (Williams & Matheny 1995). Another way the Federal government can work to nurture democracy is through the creation and financial support of federal programs that support citizen education and increased access to information and opportunities for communication (Williams & Matheny 1995). In other words, the Federal government can produce the collective goods that are too expensive and too comprehensive for any state or locality to attempt, but are critical to successful democratic dialogue.

In addition to highlighting the role of federal and local governments (nested scales) in the dialogic model of public policy (i.e., making policy and structural changes that favor democracy over capitalism), Williams and Matheny (1995) also note the importance of having individual citizens who are willing and able to take command of the information and use it for something more than their own selfish interests (role of human agency). Williams and Matheny (1995) see these as matters of socialization (process of social interaction whereby people acquire a personality, or thoughts and abilities, and learn how to live life within the norms and values of a particular culture) and attitude that emerge from citizen participation and actions at the grassroots level.

Central to this process (getting individuals to overcome their own selfish interests) is a reliance on extensive public education efforts prior to engaging in policy dialogues. Williams and Matheny (1995:201) note that the role of education in the dialogic model is not to legitimize the delegation of authority to experts or to gain

support for decisions that have already been made (managerial model, Progressive era and NEPA-based management), but to "move citizens beyond their individual concerns and confront them with their responsibilities to the larger community." Again, it is important to remember that although public education is central to changing individual attitudes, individual behaviors will only reflect these attitudes if the current incentive structures, which are produced by social organizations operating at both local and Federal levels, are changed as well (as noted above). According to Bell (1998), an 'attitude-behavior (A-B) split' often occurs when existing incentive structures motivate individuals to engage in behaviors that do not reflect their attitudes.

As indicated in the discussion above, the dialogic model reflects the theoretical concerns raised by political ecologists (i.e., importance of considering historical relations between ideal and material factors, and between individuals and social structures, across nested scales). However, another important dimension of critical theories, such as political ecology, is 'praxis' – or the practical applicability of theoretical explanations. In other words, critical theorists are often concerned with aiding human emancipation or justice through research focused on reshaping or transforming existing relations.

So, how does the dialogic model fare in terms of its practical applicability? Williams and Matheny (1995) admit that the dialogic model is most useful as a theoretical framework for providing a standard of criticism and producing a constructive debate for considering the future of social regulation. Recognizing the inherent difficulties associated with making structural transformations, particularly with regard to centralized relations, Williams and Matheny (1995:193) note that "the dialogic model

should not be measured solely by its potential for practical realization." This is particularly true when considering collaboration within Federal bureaucracies, given the inherent difficulty of creating institutional structures that actually facilitate local involvement.

As previously noted, Bell (1998) argues that social organizations must be rearranged to motivate different individual behaviors in order to avoid an A-B split with regard to environmental protection. Similarly, Williams and Matheny (1995) note that local, state and Federal governments must work to support the dialogic model of public policy through structural transformations in addition to legislative mandates. However, these transformations are difficult to achieve. This is particularly true with regard to large, formal social organizations (e.g., Federal land management agencies), which resist such transformation by design.

A bureaucracy, by definition, is a hierarchical authority structure that operates under explicit rules and procedures (Robertson 1981). The formal structure of a bureaucracy is characterized by specialized divisions of labor, chains of command, elaborate systems of written rules and regulations, and a preference for impersonal contact (Robertson 1981). In addition to its formal structure, a bureaucracy also has an informal structure of networks and norms (Robertson 1981). These structures influence both the attitudes and behaviors of individuals that exist outside and within (employees) them.

Characterizing individuals who work within bureaucracies, Merton (*as cited in* Robertson 1981:171) claims "the bureaucrat focuses obsessively on means rather than

ends, ritually following rules and procedures without any concern for the goals they were designed to serve." On the other hand, more recent research (Kohn 1971, 1978 *as cited in* Robertson 1981) shows bureaucrats tend to be fairly open-minded, self-directed, and willing to accept change. The point is not to debate whether bureaucratic structures 'determine' individual personalities and behaviors (as indicated by Merton); rather, the point is to note that they constrain certain behaviors and motivate others. Just because an individual poses the personality traits identified by Kohn (e.g., willingness to accept change), does not mean he or she will be motivated to behave in a manner designed to create change.

Although it is important to recognize that both the formal and informal structure of bureaucracies influences individual attitudes and behaviors, it is also important to recognize the inherent difficulty associated with changing these structures within large, formal organizations. According to Robertson (1981:171), the nature of such organizations is such that they face a perennial problem in that they "must balance their own need for stability and predictability with the requirement that they respond effectively to – or even anticipate – constant change in the social environment outside." Bureaucracies are frequently unable to find this balance, and often privilege the maintenance of stability and predictability. As a result, bureaucracies are typically slow to change.

Returning to the discussion of collaborative natural resources management as an example of a dialogic model of public policy, institutional support for this model (both philosophically and in practice, through structural changes and administrative mandates)

is critical to its success. Historically, land management agencies have been philosophically committed to a managerial model or Progressive era approach to resource decision-making. Furthermore, the agency structures (e.g, rules and regulations) have also supported a Progressive era approach. Both the philosophies and structures of land management agencies have been slow to change in response to changes in the social environment - as evidenced by the manner in which NEPA was institutionalized within land management agencies (reflective of Progressive era management). This notion is further supported by my research, which demonstrates that although land management institutions have philosophically committed (as an organization, not necessarily all individual employees agree) to collaboration and ecosystem management, there has been less evidence supporting the notion that the structural transformations needed to support these philosophical commitments and elicit different behaviors from individual employees have occurred.

Chapter Three: Methods

Introduction

In this chapter, I provide a detailed description of the manner in which I obtained and analyzed the data. First, I review the purpose and objectives of the study. I then discuss the research strategy that I developed to address research objectives informed by particular theoretical approaches. Following the description and justification of my research strategy, I outline the specific research methods I used. They include participatory research, semi-structured interviews and mail-back surveys. I discuss and reflect upon my role in the participatory research process. Next, I review the manner in which sampling, data collection and data analysis were conducted for both the interviews and surveys. I then offer a short reflection on ethical and trust issues that emerged during the study, and conclude with a discussion of criteria for evaluating the study findings.

Purpose and Objectives

As previously mentioned, the purpose of this study was to describe and evaluate the *Initiative for Accelerating Cooperative Riparian Restoration and Management* (BLM, USFS, NRCS) as a mechanism for promoting collaborative natural resource management consistent with the decision making framework under ecosystem management. The first objective was to define the goals, objectives, tools and processes underlying the riparian initiative and understand them in light of the spectrum of natural resource decision-making frameworks presented within the literature.

The following two sub-objectives are nested within the first objective: (1) identify an analytical framework to help evaluate collaborative decision-making initiatives, and

(2) define the principles and components underlying the riparian initiative. In order to fulfill the first sub-objective, I constructed a critical analysis of alternative natural resource decision-making models available in the literature and outlined a model of decision-making (the dialogic model) that is consistent with the tenets of political ecology. This theoretical component (see Chapter 2) was guided by the following research questions:

1- What is the nature of the public interest, and the mechanisms through which it is to be achieved?
2- What is the role of alternative forms of knowledge in collaborative, community based decision-making?
3- What tensions are inherent in top down versus bottom up approaches to natural resource decision-making?
4- What is the role of community capacity in implementing community-based resource management strategies?

In order to meet the second sub-objective, I devised a research strategy (explained below) designed, in part, to address the following research questions:

1- What was the historical evolution of the riparian initiative?
2- What is the current organizational structure of the initiative?
3- What are the initiative's goals and objectives?
4- What strategies are employed to meet these goals and objectives?

The second study objective was to evaluate the current implementation and outcomes of the riparian initiative, paying close attention to the factors at multiple scales that facilitate and constrain success. My research strategy was designed to address three specific research questions within this objective:

1- What are the dimensions of success?
2- Given the various political, institutional, and economic situations in which the initiative is applied, what factors are important determinants of success?
3- What are the on-the-ground results of the riparian initiative?

Research Strategy

A political ecology research approach emphasizes that it is important to be aware of a confluence of factors, including economic, social, political and ecological events and conditions, when seeking to understand the dynamic interaction between humans and the environment. As noted in the previous chapter, a political ecology approach brings attention to history, consideration of ideal and material dimensions of power, and an understanding of the links between micro and macro levels of social interaction (including human agency and social structures). In an effort to stay attuned to these theoretical concerns, as well as answer the research questions listed above, I relied on a case study research strategy with multiple units and levels of analysis. My intention was to examine a particular case in detail and then compare it back to the theoretical framework outlined in chapter two. In order to gain an understanding of this particular case, I used a variety of research methods (direct and participant observation, semi-structured interviews, and mail surveys) to obtain richly textured (allow the voices and perspectives of different participants to emerge) empirical work.

The use of multiple methods is also widely supported within the evaluation field. Over the years evaluation studies have shifted away from a reliance on hypothetico-deductive research approaches towards the incorporation of more holistic-inductive approaches (Patton 1980). The hypothetico-deductive approach focuses on quantitative measurement, where researchers define categories and variables *a priori*, and the use of statistical analysis to predict social phenomena. The holistic-inductive approach is derived from the tradition of anthropological field studies, which encourage the use of

qualitative research techniques such as in-depth, open-ended interviewing and personal observation. This type of evaluation research,

> is not tied to a single treatment or predetermined goals or outcomes, but focuses on actual operations and impacts of a program over a period of time. The evaluator sets out to understand and document the day-to-day reality of the setting or settings under study (Patton 1980:42).

Neither of these approaches are intrinsically better than the other; rather, they are alternatives from which an evaluator can choose. Within the field of evaluation research, it is widely recognized that multiple approaches should be used in order to increase the validity of evaluation results by balancing out the strengths and weaknesses of each or capturing different dimensions of the phenomenon in question (McCool & Guthrie 1998, Moss 1992, Guba & Lincoln 1989, Patton 1980). Patton (1980:17) argues that "today's researcher must be sophisticated about matching research methods to the nuances of particular evaluation questions and the idiosyncrasies of specific decision maker needs." In other words, today's evaluator may be called upon to use a variety of social science research methods to produce results that are relevant, rigorous and understandable.

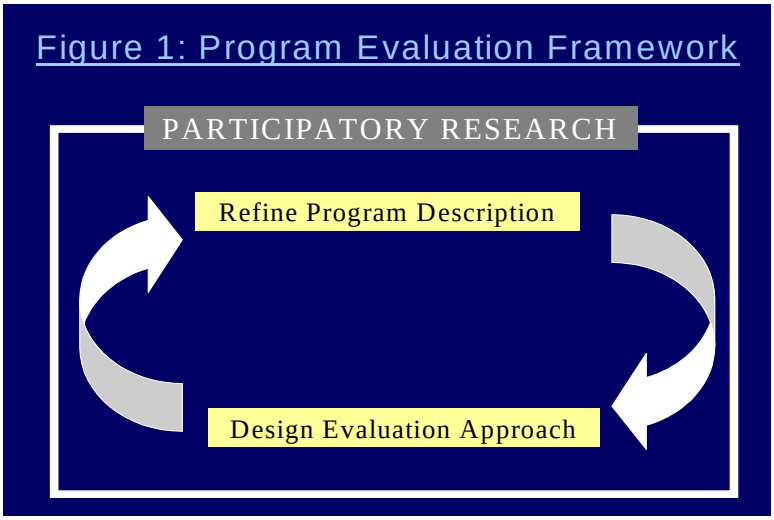
Research Methods

Participatory Research

The evaluation framework that I relied upon for this study incorporated a number of the ideals and practices underlying a participatory research approach (Figure 1). First, I relied extensively on participant observation as an evaluation method in order to gain a personal understanding of the riparian initiative (program) that would not have been entirely possible using only the insights of others (Patton 1980).

Second, my evaluation framework rested on the joint production and utilization of knowledge, rather than reflecting more traditional approaches whereby the researcher controls the research process. In other words, I wanted to work collaboratively with program implementers in the design of an evaluation approach. As a researcher, my role in this process was to provide program implementers with the tools to generate the knowledge that they needed to work on (transform knowledge into action in terms of practical outcomes or structural changes) the problems that affected them. I recognized that because program implementers are key participants in the riparian initiative, understanding and incorporating their views is key. I hoped that their involvement would ensure the quality and appropriateness of the evaluation design, as well as ensure meaningful (staff) participation in the evaluation. Finally, I hoped that this type of approach would encourage the implementation of recommended changes based on evaluation findings and the continuation of future evaluation efforts.

Figure 1: Program Evaluation Framework



I began working as an intern (volunteer) with the National Riparian Service Team (NRST) during the summer of 1999. In order to get a feeling for the range of activities undertaken as part of the riparian initiative, I spent the majority of the summer traveling with NRST to various locations across the west. I attended a 'Train the Trainer' session, which was sponsored by the NRST to train potential state cadre members as organizers and instructors for Proper Functioning Condition (PFC) workshops. I also accompanied the NRST on a number of service trips and cadre assistance trips (e.g., to help with PFC workshops); and participated in the semiannual cadre coordinator conference call that was conducted following the field season. Finally, I spent time reviewing initiative documents and interacting with team and network members. My goal at this time was simply to observe the workings of the initiative, and gain a better sense for the nature of this effort.

I was hired as a member of the National Riparian Service Team, through the BLM/USFS Student Career Experience Program (S.C.E.P.), in the fall of 1999. While enrolled as a student at the University of Montana, I worked part-time with the NRST from Missoula. At this time, I began to engage more with team members in terms of information sharing and evaluation design. For instance, Susan Holtzman, the team coordinator, and I spent several months preparing and administering a mail-back survey of service trip coordinators. The objective was to gather some preliminary information regarding program effectiveness prior to the design of the more formal evaluation. I also attended the 'network coordination meeting' that was sponsored by the NRST and held in Reno, NV (1/24/00-1/27/00). Attendance at this meeting not only gave me a sense of the

‘big picture’ regarding the riparian initiative, but also alerted me to emergent issues such as a number of barriers facing implementers across various organizational levels.

I moved to Prineville, Orgeon in the summer of 2000, and spent three months working full-time with the NRST. Although I occasionally traveled with the team and participated in day-to-day activities (e.g., team meetings), most of my time was devoted to designing the evaluation (and soliciting required study approval from the Office of Management and Budget). I worked closely with NRST members in this effort.

First, we identified the need for evaluation and use of this information, including internal and external needs (with regard to the initiative itself). We determined that initiative implementers (internal) needed to identify specific program achievements and areas where program improvements could be made. Externally, there was a need to examine the practicality and effectiveness of the riparian initiative and provide this information to funding organizations, political officials, and other interested publics. Another use of the evaluation results was to provide outcome-based information to meet requirements outlined within the Government Performance Results Act (GPRA), since the initiative is sponsored by federal agencies. In response to this, efforts were made to design performance and outcome measures that could be easily compared to national agency (BLM, USFS, and NRCS) strategies. Finally, we recognized the opportunity to make a contribution to the research field that is currently emerging around the evaluation of collaborative resource management efforts.

In order to identify what to evaluate, why, and how, we defined the program in terms of goals, service areas, resources, expected outcomes and performance standards. In other words, we described what the program was trying to accomplish, and how it

brought about those changes. We also discussed criteria and standards for recognizing desired outcomes, methods for assessing the impacts of different project phases over time, and ways to provide outcome-based measurements for results that are not easily measured by standard surveys and questionnaires.

We agreed upon an evaluation strategy that incorporated a mix of evaluation methods, which included multiple measures of success and were designed to solicit feedback from both participants and implementers. The surveys focused on obtaining participant perceptions in terms of a number of indicators including satisfaction, skill and knowledge transfer, near-term and long-range procedural and substantive outcomes, and program context or internal and external barriers. Additionally, sociodemographic information was gathered and used to determine the diversity of audience participation.

The interviews focused on implementers and relied primarily upon self-assessments. Specifically, respondents were asked to reflect upon whether they felt that their cadres were being successful, whether other players in the network were being successful, and whether their clients believed that they were successful. Team members were instrumental in identifying and selecting individuals to serve as potential interviewees (the sampling strategy and rationale is explained below).

I returned to Missoula in fall of 2000, and continued to work as a part time team member until I was hired full-time in October 2001. During this time, I had (and still have as of this writing) a number of responsibilities as a team member in addition to administering the evaluation and analyzing collected data. Specifically, I presented our evaluation strategy at a variety of conferences. I also participated in the Consensus Institute, a four-week training course in meeting facilitation, conflict resolution and

consensus building techniques. I have since been called upon to use these skills in a variety of settings (PFC for Managers Course, OR10/17/00-10/19/00; Riparian Coordination Network Meeting, NV 5/15/01-5/17/01; Riparian Coordination Workshop, UT 4/15/02-4/17/02). Finally, I participated in the creation of the NRST's 5-year accomplishment report (NRST 2002) and the revised strategic plan (NRST 2003).

One would think that internal evaluations, conducted by team member or employee, would create pressure to paint a positive picture. In actuality, however, it this was not the case because the team members themselves welcomed changes geared toward increasing the effectiveness of the riparian initiative. Furthermore, there were a number of advantages to incorporating the ideals and practices of participatory research. First, it helped me to understand the various dimensions of the riparian initiative, as well as the underlying context within which the initiative operates. Second, the fact that I was viewed as an insider greatly enhanced informant trust and willingness to engage in open discussions. Another advantage to being a participant observer was the fact that I could draw upon my direct experiences and personal knowledge during my analysis and interpretation of survey and interview data. One of the issues that I continually struggled with during this process was the fact that I was occasionally called upon to provide recommendations before the study was completed. Although at first I saw this as a constant source of tension, I believe that the advantages of this activity far outweighed the disadvantages because I was often able to solicit feedback on my analysis and interpretations that provided additional insights.

Although reliance on a participatory research framework provides a number of benefits, it also requires increased attention to the relationship between a researcher, the

research process, and the participants. Specifically, a researcher must critically reflect on the products of his or her participation. This is particularly a concern in my study because I have actively participated in the riparian initiative as a NRST member for the last three years. As a result, I have directly shaped the course of events in a variety of ways. For instance, a number of strategic and operational decisions regarding the riparian initiative have been made and implemented over the course of the last three years based on the preliminary analysis of the findings from this research.

I am pleased that the evaluation findings were considered useful and relevant, and that recommendations were implemented. However, I have also spent large amounts of time considering how the lens through which I view the evaluation process has shaped the research findings themselves. I realize that the research questions, my relationships with people in the field, and the analysis and interpretation of my field observations (or interview texts) have all been influenced, to some extent, by my prior knowledge and personal experience. Specifically, my past educational and field experience, my current educational status (especially being a PhD candidate within a primarily agency setting), my gender, my age, my birth place (especially being from New Jersey and now working in the west), my cultural background, and a variety of other factors that shape the way I view the world have influenced the dynamics of this study.

I do not believe that this represents a problem, however. First, my position as an 'outsider' (in addition to my participation) enabled me to present not only others' perceptions regarding the initiative, but to incorporate my own as well. This allowed for a more comprehensive evaluation of the riparian initiative. Second, given the collaborative nature of the evaluation process, I was one voice out of seven. Most of the

team's decisions, including those regarding the evaluation, were and continue to be made as a group. Additionally, the nature of an interdisciplinary team, such as the NRST, requires a commitment to information sharing and mutual learning between individuals/specialists. I have learned from each team member and they have learned from me. This interaction resulted in the co-creation of an evaluation strategy, which led to a set of findings from which agreed upon strategic and organizational changes were made in an effort to improve the effectiveness of the riparian initiative.

Semi-Structured Interviews

The primary goal of the interview portion of the study was to provide an in-depth description and evaluation of the riparian initiative through the eyes of those who are charged with its implementation. I decided to focus on implementers' perceptions because I wanted to get their understanding of the problems and their suggestions for changing the riparian initiative. Thus, individual members of the extended riparian coordination network composed the sample. A more detailed description of this network is presented in chapter five. In short, the extended riparian coordination network is primarily composed of individuals who span the organizational hierarchy of the BLM, USFS and NRCS. However, state and county employees, as well as private citizens, also participate. Individual network members work within different organizational components of the riparian initiative including the National Riparian Service Team (NRST), state level cadres, and agency program coordinators.

To conduct these interviews, I selected members from each of the three network components (NRST, state level cadres, and agency program coordinators). I used

purposive sampling techniques to select ‘representative types’ (see Patterson et al 1998) of individuals from each component (each of the three sampling strategies are discussed in detail below). Once individual informants were selected, I then developed semi-structured interviews to gain insight and understanding regarding how network members conceptualize the initiative and the role these members play in its implementation. Given the in-depth nature of the interviews, the length of my interactions ranged between 45 minutes and 2 hours. Additionally, as part of the confidentiality agreement made with informants, I offered them an opportunity to review a draft of the final dissertation results in order to see how their interviews were used and to provide comments. In an effort to strike a balance between obtaining a sample size that was large enough to provide insight but till a workable size (including follow-up efforts), a total of 26 interviews were conducted.

As previously indicated, I relied on three separate sampling strategies in the selection of informants from each of the network components. First, I interviewed four out of the seven NRST members during the initial stages of my research in order to gain an understanding of how they see the riparian initiative. I selected the four respondents rather than all seven for two reasons. First, one of the team members had only recently joined. Second, two of the team members outwardly expressed discomfort with the interview process. They also seemed to display a general uneasiness with regard to me and my research agenda. In the interest of promoting my relationships with team members, I chose to skip over these two individuals during the first round of interviews. I was not too concerned with this decision because I originally intended to conduct a second round of interviews with all team members at a later date. However, given the

nature of my interactions with all seven NRST members (including those individuals who resisted initially) over the last three years and the quality (and depth) of information provided in the first four interviews, I decided (after consultation with my committee chair) that a second round of interviews would not confer additional benefits on the study.

The second component of the riparian network is the twelve state level cadres (including British Columbia). Part of the sampling strategy for this component was to select two cadres and explore them in-depth. The two cadres (Colorado and Utah) were selected by the NRST for this study because they represent a cadre that they perceived to be functioning well (Colorado) and one that is struggling (Utah). Within each state, I interviewed a number of cadre members. NRST members guided selection decisions.

First, we selected both the Colorado (BLM employee) and Utah (BLM employee) cadre coordinators. We selected an additional three (out of nine) additional members from the Colorado (CO) cadre for a number of reasons. First, they held diverse affiliations (USFS and two private members, one rancher and one environmentalist). Second, they were 'full-time' cadre members – as opposed to two of the nine cadre members who were NRCS employees from Montana that occasionally worked for the CO cadre. Finally, the individuals selected had a long-history with the riparian initiative.

Regarding the Utah (UT) cadre, we selected five (out of eight) additional cadre members. These individuals were chosen for a number of reasons. First, two out of the five selected members had served as previous cadre coordinators. The team and I felt that it was important to interact with these individuals because the UT cadre has been through three cadre coordinators in the last few years (recent changes). The other three

members were selected because they held diverse affiliations (Governor's Office, Utah Farm Bureau, and Utah State University).

The third component of the riparian network is the agency program coordinators. Within each of the three agencies (BLM, USFS and NRCS), there are both regional and D.C. level coordinators. The three regional coordinators from each agency were selected for both Colorado and Utah. However, the BLM riparian coordinator for Colorado is also the cadre coordinator. Similarly, the BLM riparian coordinator for Utah is also one of the previous cadre coordinators. So, in actuality, only four new informants were selected.

Finally, eight respondents were selected from D.C. level program coordinators. Regarding the sampling strategy for this component, it is important to remember that the NRST is a Washington Office (W.O.) team. In order to avoid a detailed description of agency organization, suffice it to say that each agency houses a number of programs within the W.O. The NRST is housed within one of the programs in the BLM (Renewable Resources and Planning) and another in the USFS (Watershed, Fish, Wildlife, Air, and Rare Plants). Approximately, four organization levels exist within each program (actual titles differ between agencies): director, assistant director, group leader, program manager. We selected one respondent from each of these levels within the BLM (four in total).

We selected three additional informants from various organizational levels within the USFS. Although I attempted to interview a representative from each of the organizational levels within the USFS, this proved impossible because the agency was undergoing a number of personnel changes as a result of election year changes (new President selecting new appointees). In the end, I spoke with the USFS program director,

a previous USFS program manager who had worked extensively with the NRST during the initiative's early years, and the retired USFS Chief who originally endorsed the riparian initiative in 1996. The final W.O. employee that was selected was the assistant program director in the NRCS. Given the limited role that the NRCS has historically played within the riparian initiative, team members felt that it was unnecessary to select individuals from each of the organizational levels. The two W.O. employees who directly 'supervise' the NRST were contacted, but I interviewed only one.

The interviews followed an open-ended interview process, which produced interactions between myself and the interviewee that were conversational in nature. Regarding data collection, an open-ended interview process was used. Interviews of this sort tend to take on the form of a conversation between the interviewer and informant. I used this process because it afforded me the opportunity to capture the way in which respondents think and communicate about issues. It also provided me with the flexibility needed to be responsive and explore emergent data, as well as gain clarity. In order to ensure that results were systematic and focused enough to be compared across interviews, however, an interview guide was developed (Patterson et al 1998, Charmaz 1991, Kvale 1983). This guide identified a series of themes to be addressed (see appendix). Specifically, how does the initiative operate (goals, objectives, tools, and processes)? How it is influenced by the various situations in which it is applied? What are its advantages and disadvantages? How are participants including interviewees, affected? What are the on-the-ground outcomes? For each theme, a series of possible lead-in and probing questions were identified.

Interviews were tape recorded and transcribed verbatim. This was done to fully capture the dynamic nature of each co-constructed conversation, as well as provide a reference for tracking and clarifying interpretations (Mishler 1986). Interview tapes were professionally transcribed. In order to increase my familiarity with the data, and reduce the chance for transcription errors, I reviewed the completed transcriptions for gaps and mistakes.

Each edited interview was then analyzed at both the idiographic (individual) and nomothetic (across individuals) scale, and organizing systems were developed. The purpose of an organizing system is to identify predominant themes through which interview can be meaningfully organized, interpreted and presented (Patterson et al 1998, Tesch 1990). The process of developing an organizing system is the 'analysis,' while the final organizing system is the product of the analysis. The development of an organizing system is a systematic process beginning with the identification of themes (my interpretation of what meaning units reveal about the phenomenon being studied), and ending with my analysis of the interrelationships among these themes.

As part of the individual level analysis, organizing systems were created for each individual interview. The process of developing an organizing system for individual interviews culminated in the creation of a figure for each interview. This figure provided a sketched representation of the various themes and interrelationships between these themes, as identified and communicated by individual respondents. Rather than a model or description of reality to be tested, the completed figure is a device designed to aid my understanding of and ability to communicate 'what's going on' within an individual interview. In other words, a variety of figures could be constructed to organize and

communicate the concepts within each interview. I merely constructed one possible system for organizing each interview.

In order to ensure that the figure was a rigorous (valid) representation of the data, I engaged in a number of 'checks.' First, I engaged in a self-check by continually revisiting the interview text during the initial creation of each individual figure, the nomothetic analysis, the interview coding process, and the writing phase to 'test' the accuracy of the figure. Concerning discussions regarding efforts to 'test' the accuracy of individual figures, it is important to remember that I was not 'testing' the figure as a representation of reality. Nor was I attempting to test preexisting propositions. Rather, I was adhering to a testing logic that supports a reliance upon a continual dialogue between the researcher and the data – one that is devoted to developing an understanding of the issue (Patterson & Williams 2001). Mishler (1990) describes a similar testing logic in his discussions of inquiry guided research. He uses the term 'inquiry guided research' to refer to a "family of approaches that share an emphasis on the continuous process through which observations and interpretations shape and re-shape each other." (Mishler 1990:416).

As part of this study, I engaged in this conversation individually, as well as with peers and 'members.' Regarding peer-checks, I frequently worked with my dissertation committee co-chair (and occasionally with other graduate students) to ensure that my figures accurately reflected the nature of individual conversations. These interactions progressed through a number of phases. First, we jointly read the interview transcripts and discussed the figures that I had created for approximately five interviews. We stopped at five because we were typically interpreting the data in a similar manner. At

this point, the nature of our interaction changed and I began to present and explain individual figures my co-chair had not previously read. We reviewed another five interviews in this manner, and then I completed the remainder of the figures on my own. Since the figures themselves are not presented within the analysis (explained below), and therefore not available for external review, peer-interaction provided a second test. Consistent discussions between myself, my committee co-chair, and other graduate students provided a forum for housing a transparent deliberation regarding my interpretations and underlying assumptions.

Finally, I have engaged in member checks during the course of this study in an attempt to verify my interpretations and conclusions. According to Guba and Lincoln (1989:239), "if the [researcher] wants to establish that the multiple realities he or she presents are those that stakeholders have provided, the most certain test is verifying those multiple constructions with those that provided them." These checks occurred both informally and formally.

As indicated above, a large portion of my analysis was devoted to organizing, understanding, and interpreting individual interviews. However, the analysis in the dissertation presents a discussion of the phenomenon at the nomothetic level (across individuals) as opposed to individual figures. I have made this decision, because I am interested in phenomenon itself (the riparian initiative) rather than individual perceptions of the initiative. However, the creation of organizing systems (figures) for individual interviews (idiographic analysis) was a necessary step in my analysis process because I did not use structured questionnaires. As a result, the individual texts produced have different structures (organization, flow of topics), even though they provide comparable

information. In turn, an understanding and analysis of each individual interview was required prior to an aggregate level analysis.

Once figures were completed for individual interviews, I identified and analyzed themes across individual interviews. The process for analyzing interviews across individuals was very similar to the process used at the individual level. Given the extensive analysis performed at the individual level, I had a very good understanding of the dynamics of each conversation and was able to easily recall each interview. I then identified the larger, more generalized, themes that ran across interviews. I sketched figures depicting the interrelationships between these themes as well (see Chapter 6). Once I had a better understanding of the 'big picture,' I then coded the individual interview texts to correspond to the themes and sub-themes outlined in the figures. I eventually used the text as data to illustrate and substantiate my presentation of larger themes.

Mail Surveys

The third method I used to collect data was the design and distribution of mailback surveys, which were sent to initiative participants. I conducted two surveys, one focusing on service trips and one on PFC workshops, in order to provide a generalizable description and evaluation of the riparian initiative. The nature of both service trips and PFC workshops is discussed in detail in Chapter 4. In short, service trips are a set of training and consultation activities that the NRST provides to existing groups (upon their request) in an effort to facilitate the cooperative restoration and management. PFC workshops are training sessions provided by both the NRST and state

cadres in an effort to develop a common language or understanding between diverse individuals (rather than existing groups).

Service Trip Survey

The service trip survey was initiated as part of the 'information gathering' phase of the evaluation (i.e., period of time during which I also observed the team, conducted preliminary interviews with team members in order to better understand the nature of the riparian initiative). The survey consisted of eight questions, with space for respondents to provide further comments (see appendix). It was deigned to solicit feedback on two issues. The first was satisfaction with client services provided by the NRST, including the team's attributes, services and products delivered, communications with the NRST, and fulfillment of outlines objectives and outcomes. The second issue addressed by the survey was evidence that participants have adopted initiative principles. Specifically, was the group's capacity for working cooperatively increased as a result of the intervention? Were cooperative management plans designed and implemented? Had the initiative made a difference in the condition of riparian areas in the area?

The sample consisted of 62 service trip coordinators who had requested NRST assistance between 1996 and 1999. Surveys, including an introductory letter (signed by the NRST), were sent to each coordinator by a member of the NRST. Susan Holtzman (NRST coordinator) made a follow-up phone call to each coordinator who had not returned the survey by the sixth week. Thirty-seven were eventually returned, yielding a 60% response rate. I coded responses from completed surveys and entered them into

SPSS (Statistical Package for the Social Sciences). I then used SPSS to conduct a descriptive analysis of the data.

PFC Workshop Survey

The second survey, which focused on PFC training sessions, was conducted as part of the larger evaluation. It was designed, like the service trip survey, to capture the perceptions of training session participants in two key areas: (1) satisfaction with the NRST, state cadre, and workshop design; and (2) program effectiveness, including evidence that participants have adopted initiative principles. The survey was also designed to collect demographic information about workshop participants. Most of the measurement instruments relied on quantitative scales; however, some open-ended questions were also included to get their suggestions for future refinement of program objectives and measurement instruments (see appendix).

Based on previous research and discussions with team members, a number of thematic areas were identified and included within the survey. These areas included: participant perception in terms of satisfaction, skill and knowledge transfer, procedural and substantive outcomes (near and long-term), and program context (barriers); and the collection of demographic information to assess the diversity of participants. The majority of the measurement instruments incorporated within the survey were designed specifically for the riparian initiative. However, the measurement construct used to determine participant perceptions of whether their knowledge increased was adapted from the Transfer of Training Evaluation Model (T.O.T.E.M.) designed as part of a

Department of Energy (1995) contract. Prior to administering the survey, measurement instruments were reviewed by the NRST and members of my committee.

The sample for this survey was selected from adults (over 16) who participated in PFC workshops sponsored by the NRST or cadres in various states. Three thousand (3,000) participant names were generated from attendance lists provided by the NRST and various state cadres for training sessions conducted between May 1995 and May 2000. Unfortunately, inconsistent record keeping among the cadres resulted in the loss of approximately 2,000 participant names. As a result, there is no way to explain the characteristics of those groups or to ensure proper representation of all groups.

Rather than a study designed to test hypotheses with regard to different sub-groups, which require the use of stratified sampling techniques, this survey was designed to be exploratory in nature. As a result, a simple random sampling technique was used. However, based on research findings regarding audience composition (discussed in Chapter 5), it would have been worthwhile to stratify the sample because the Federal government employees dominate the population participants. As a result, the survey findings represent the views of Federal employees (typically BLM, USFS and NRCS), while the views of state, local and Tribal government employees, as well as private landowners and interested citizens, are drastically underrepresented. In the future, a stratified sampling technique would help ensure that there are enough completed surveys in each category to allow for between group comparisons.

Following the sampling procedure outlined by Salant and Dillman (1994), six hundred and ninety four (694) potential respondents were selected. Given the size of the study population, Salant and Dillman's process conservatively estimated that 357

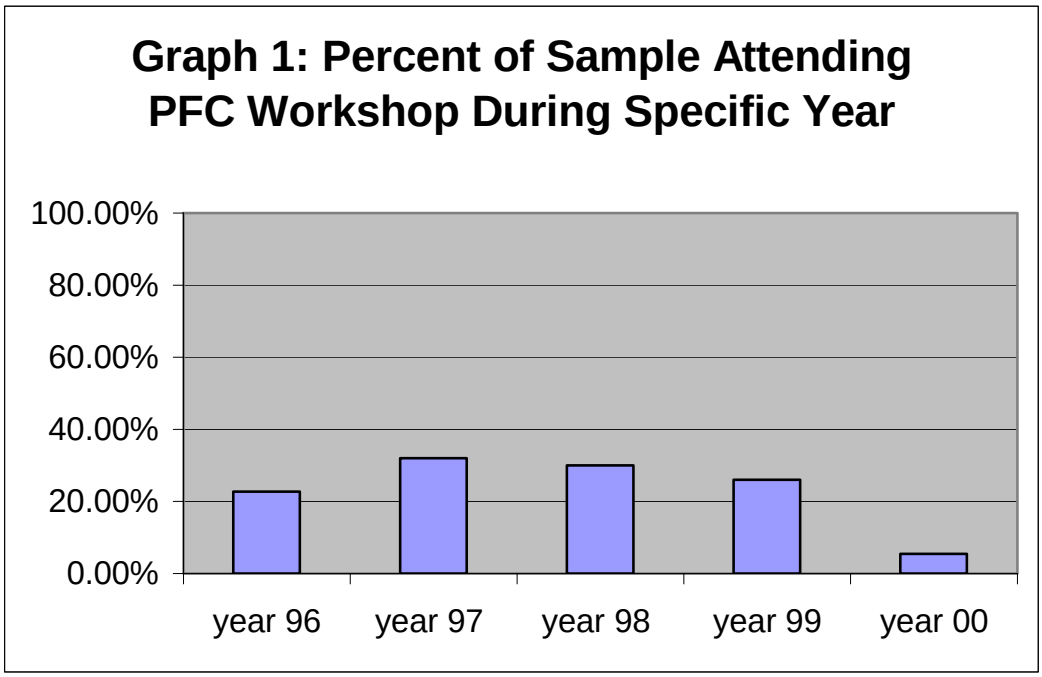
returned surveys were needed to ensure that the sample accuracy reflected the true population at a 95% confidence level (SE +/- 5%).[4] Considering the flaws within the participant database, and the fact that individuals may have moved since participating in a workshop six years prior, I decided to select 694 names in the hopes of achieving at least a 50% return rate.

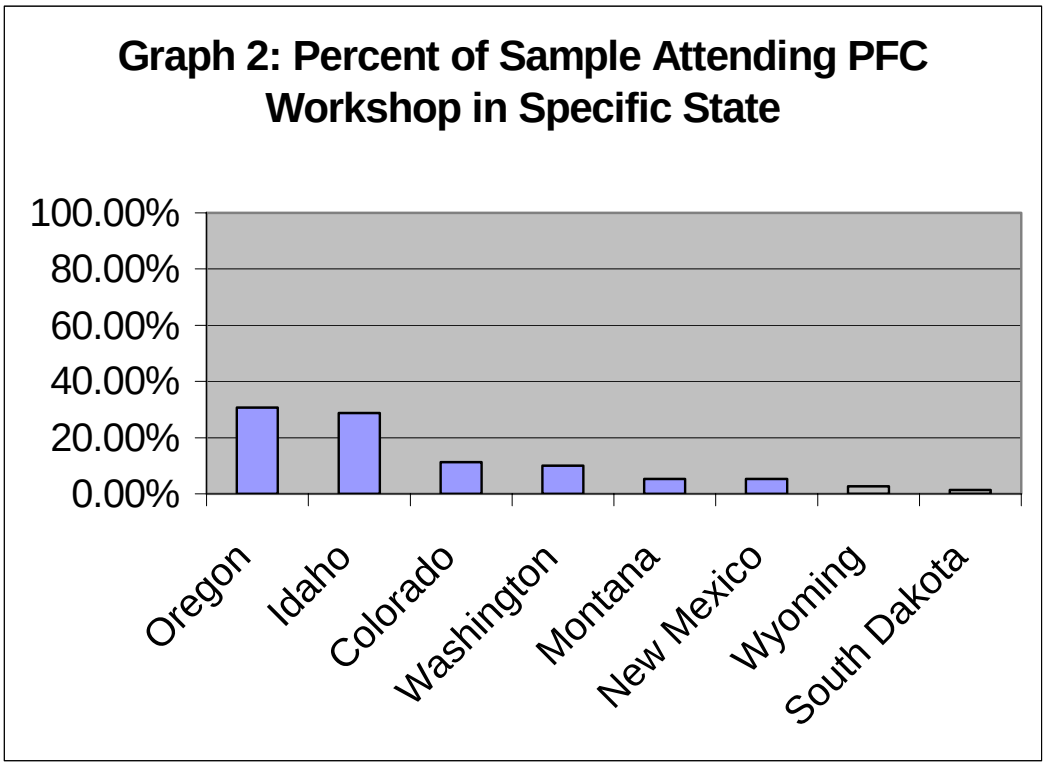
In actuality, only 564 surveys were mailed because a number of selected participants either lacked contact information entirely, or had provided incomplete contact information. In instances where a name was randomly selected for which no contact information was supplied, the next person on the list who had provided contact information replaced the original selection. In instances where a selected individual had provided only partial contact information (i.e., insufficient mailing address), myself and NRST members made attempts to complete the addresses via phone calls and directory searches. However, it was not always possible to complete the information. In the end, 130 of the selected names were removed from the mailing list due to incomplete information.

In an effort to attain a relatively high response rate, the survey process was conducted using Salant and Dillman's (1994) approach. This approach requires an initial letter introducing the study, survey and cover letter, postcard reminder, and at least one follow-up mailing of the survey package. Correspondence was drafted following the guidelines presented in their book. Although efforts were made to achieve a high response rate, only 147 surveys were returned. Respondents were relatively evenly

[4] Since 147 surveys were returned, I am 95% confident that my estimates have a sampling error that is greater than +/- 5%, but less than +/-10%.

distributed between 1996 and 1999, in terms of the year when they participated in the PFC workshop (Graph 1). Approximately 60% of respondents attended sessions in Oregon and Idaho, followed by Colorado and Washington (Graph 2).





In addition to the 147 surveys that were completed and returned, eighty-six (86) additional surveys were returned because individuals had moved, retired or never actually participated in the workshop. Assuming 478 mailed surveys were received, I achieved a 31% response rate. In an effort to assess response bias, fifty (50) non-respondents (10%) were randomly selected to receive follow-up phone calls.[5] As with the mail survey, if a person was selected who did not provide a contact number, I proceeded down the list and picked the next person who did. The follow-up phone call was designed to capture responses to key survey questions and provide insight into why the survey was not returned. Agreement was reached between myself, NRST members,

and members of my dissertation committee regarding the selection of key survey questions (see appendix). The results from the follow-up calls[6] are presented below (Table 2).

Based on the results of the follow-up phone calls, I estimated that 55% of the non-respondents to the survey were non-contacts (Table 2). I feel that this is a reasonable assumption, given the existing problems with master lists and the fact that some lists are six years old. Of the 27 non-contacts, two stated that they had not received the survey. I sent them new copies, and they were eventually returned. Assuming that 55% of non-respondents were non-contacts rather than non-respondents, my response rate would be 50% (Table 3).

Table 2: Results from follow-up phone survey

Number ***(%)***	**Status**
27 *(55%)*	Non-contacts (moved, retired, phone number disconnected, wrong contact number provided, didn't receive survey, didn't take course)
11 *(22%)*	Unavailable (on vacation, out of the office – 2 attempts made, messages left when possible)
9 *(18%)*	Contacted and responded to some or all of phone survey. *Why didn't they return the survey?* 3 too many other priorities at work 4 took course too long ago to remember 1 couldn't evaluate PFC because not using it 1 unknown

[5] I chose to make 50 follow-up phone calls after conferring with Dr. Caruso, a statistician in the psychology department at the University of Montana. The conclusion was reached that in order to statistically compare respondents to non-respondents, I needed a sample that was large enough to make assumptions about normality appropriate (n=30, Central Limit Theorem).

[6] The percentages are based on 49 phone calls, because I person contacted had sent in the survey but removed the label.

Table 3: Calculation of response rate adjusted for proportion of non-contacts estimated from non-respondent phone survey

564 surveys mailed – 86 known non-contacts = 478 surveys assumed received[7]
478 surveys assumed received – 147 returned = 331 not returned
331 non returned x 55% non-response non-contacts = 182 estimated non-contacts
331 not returned – 182 estimated non-contacts = 149 non-responses
147 returned surveys + 149 non-responses = 296 surveys received
147 returned surveys / 296 surveys received = .496 x 100 = 49.6% response rate

A work-study student entered responses from completed surveys into SPSS. In order to ensure accurate and consistent data entry, the student was presented with a coded copy of the survey booklet and a written set guidelines for handling alternative data situations. The first 15 surveys entered were checked question by question as a quality control measure. I spot-checked the remaining surveys.

Ethics and Trust

Important to any study is a consideration of ethics and trust issues. Within this particular evaluation, I struggled with two important ethical issues. Regarding the collection of data, the first key issue was the extent to which I should reveal my institutional affiliations and research agenda to others. Rather than operating as a covert observer or interviewer, I chose to openly share this information with participants. It is

important to note that decisions regarding this issue were guided and agreed upon by all team members. We felt the decision to be overt was appropriate for two reasons. First, participants were likely to willingly cooperate because they were anxious to improve the program. Second, I was more likely establish an open dialogue and obtain accurate and truthful information if the participants trusted me as a person and a researcher.

The second ethical issue that I struggled with concerned the manner in which survey and interview data were stored and presented. In order to encourage truthful responses to survey and interview questions, I wanted to assure respondents that they would not be personally linked to the answers that they provided. My intentions were communicated to survey respondents through the following statement (Office of Management and Budget [OMB] approved) placed on the inside cover above the first set of questions:

> Your cooperation is extremely important, since each respondent represents many others who will not be surveyed. The identification label used on mail-out questionnaires is for mailing purposes only. We will summarize the results of the answers you provide. We will keep your answers, names, and addresses confidential to the extent required by law.

Once completed surveys were returned, names were checked against the master mailing list to reduce multiple mailings. At this time, mailing labels were removed from returned surveys and an identification number replaced names and contact information.

The nature of the interview process called for a slightly different approach for ensuring confidentiality. Prior to each interview, I pledged confidentiality to the respondent. I explained that my intention was to include their answers, verbatim, within

[7] Eight six surveys were returned by the Post Office (return to sender); however, it is unclear whether the remaining 478 surveys were actually received by the addressee.

the final report, but that neither their names nor identity would be linked to specific interview responses. I also offered each interviewee an opportunity to review a draft of report sections where selected interview responses were used and to petition for the removal of specific excerpts that they felt threatened the pledge of confidentiality. As part of the data analysis process, I worked to protect informant confidentiality by replacing real names with pseudo names for future reference. However, given the close-knit nature of the riparian coordination network, I was concerned that readers would be able to identify respondents by their manner of speech. If a respondent could be identified through even one specific comment, the pseudo name would no longer protect an individual's confidentiality regarding future excerpts. In order to guard against this, I took further steps during the writing process to ensure participant confidentiality. Specifically, in each table (8-30), I replace pseudo names with different identification numbers, so that it is nearly impossible to track the responses of a single informant across the tables.

Evaluation Criteria and Use of Data

In addition to documenting the manner in which this study was conducted, it is also important to provide the reader with an overview of the criteria against which the research findings should be judged. The first set of criteria addresses the question: Do the analysis and presentation of results conform to the norms or standards of science? According to Patterson and Williams (1998:284),

> science is a rigorous and systematic set of empirical activities for constructing, representing and analyzing knowledge about phenomena being studied that is guided by a set of normative philosophical commitments shared by a community of scholars.

At the broadest level, normative philosophical commitments regarding the nature of science range across a continuum that can be broadly grouped into foundationalist and anti-foundationalist worldviews (Patterson & Williams 2001).

Foundationalist worldviews maintain that there is a single, ahistorical, universal set of rules for distinguishing science from non-science such as falsificationism (Patterson & Williams 2001). Proponents of this paradigm argue that there is one, and only one, logic for the collection and analysis of scientific data. Strict positivism and/or attempts to define a single testing logic as the only one that is scientific (e.g., falsificationism) reflect the most extreme versions of foundationalism (Patterson & Williams 2001). Anti-foundationalist worldviews maintain that there is no universal, ahistorical set of rules for guiding the work of scientists or judging the merits of the information they produce (Patterson & Williams 2001). Extreme relativism and the belief that nature in no way constrains what it is observed to be or the only rule is that anything goes reflect the most extreme end of anti-foundationalist worldviews (Patterson & Williams 2001).

Critical pluralism is an anti-foundationalist worldview that recognizes relativity (there is more than one approach to science) but that there are criteria for distinguishing science from non-science. Rather than advocating a reliance on universal methods and standards for the practice of science, proponents of a critical pluralist perspective highlight the universal *characteristics* of science (Patterson & Williams 2001). The first

characteristic of science is that it is a test of ideas, where empirical observations are linked to research concepts. The manner in which data function as a test of these ideas is determined by the 'testing logic,' employed by the researcher. In other words, the testing logic is the set of principles that guides decision-making regarding sampling, data collection and data analysis. The testing logic that guided my research is presented above through the explanation of research methods and principles.

According to Patterson and Williams (2001), a second characteristic of science is that observations are systematic and rigorous. The term 'rigor' refers to adhering rigidly to an analysis logic or set of principles, while 'systematic' means marked by thoroughness or regularity (and organized procedure). In other words, "scientific analysis does not entail selective use of data for the purpose of supporting preconceived ideas...research is guided by a well-developed theoretical framework, set of research principles, and a detailed and defensible design" (Patterson & Williams 2001:185). Quantitative analysis is systematic and rigorous in a number of ways. For instance, there are very specific methods for collecting data (e.g., standardized surveys, standardized procedures for administering a survey, and preferred methods for designing and arranging questions within a survey). Furthermore, quantitative approaches employ statistical principles that are well developed (e.g., probability sampling, procedures addressing non-response rate, and techniques for analyzing data).

Qualitative research is also systematic and rigorous in a variety of ways. For instance, the use of interview guides allows for a certain degree of standardization across interviews while at the same time providing an opportunity for the respondent and interviewer to negotiate an understanding of questions and answers. In addition to the

interview guide, there are ways of conducting interviews (much comes from practice as an interviewer) that reduce the propensity to questions that are leading to an inappropriate degree. Data analysis and the development of an organizing system (described above) is also a systematic and rigorous process in which emerging ideas and interpretations are tested against the data.

A third universal characteristic of science, as identified by Patterson and Williams (2001:5), is that the adequacy of the research is subject to external criticism.

> That is, the principles guiding the logic of the empirical test, the underlying research concepts, the methods used, and the data are all presented in such a way that readers are able to make a relatively independent assessment of the warrants or justifications for the interpretations and conclusions drawn from the empirical observations.

Below, I present evidence to show that I have adhered to these principles.

First, I have provided an in-depth explanation of my research process including problems and how they were handled. In addition to outlining the procedures, I have also included the measurement instruments so readers can decide for themselves whether the constructs are valid and have been operationalized effectively. I have also commented on my position and interactions as a researcher, and how this may have affected the findings of this study or the changed nature of the initiative itself. Second, I have conducted various informal and formal 'member checks' during the course of the research process in an attempt to verify my interpretations and conclusions. Finally, I provide indirect evidence that the use of data was not selective in the presentation of the data. Regarding quantitative data, I have presented numerical data via graphs, charts and mathematical formulas (e.g., means). In addition to presenting data that directly corresponds to the findings highlighted within a section (Chapter 5), I have also included the entire

percentage break down for both surveys as appendices. Decisions regarding the presentation of qualitative data were more complex and require a more lengthy discussion, which is presented below.

The first set of decisions regarding the presentation of qualitative data concerned my personal observations. I frequently relied on my personal observations and understanding of the riparian initiative during the analysis process. Rather than a systematic analysis of field notes, I used my observations to aid in the clarification and development of interview themes (on-going reflection). I also relied on my personal experiences as a participant in the riparian initiative in my interpretation of interview themes and relationships between themes. These observations are not specifically identified within the results sections, rather they have been integrated into the final products.

The second set of decisions regarding the presentation of qualitative data concerned interview texts. In an ideal world, I would have provided the reader access to all of the interview data within this dissertation. However, this is not feasible because of confidentiality concerns and the large volume of qualitative databases. So, I had to make choices regarding the amount of data to present. How could I provide sufficient evidence that data were not selectively used?

Regarding the criteria of external review and qualitative interviews, data are one of the most difficult issues to address. While I can present my data, it is in actuality only indirect evidence that data weren't selectively used. Decisions regarding the presentation of data were different based on the nature of the result section in which they were incorporated. Although interview texts are a primary source of data for the three results

sections, in some sections, interview excerpts serve an illustrative role while in others they provide a justification of my interpretations as well. I incorporated most interview excerpts in the results section that reflected more of my interpretations and less in those that provided descriptions. Specifically, in chapter four, which explains the history and design of the initiative, most of the interview data has been summarized and paraphrased, with a few interview quotes included to illustrate key concepts. I chose to use the interview data in this manner because the intent was to provide more of a description rather than an analysis per se.

In chapter five, findings are based on an integrated (or triangulated) analysis of results from all three data collection methods (participant observation, surveys and interviews). Often the case is made in a more concise form via the presentation of survey data with reference to how personal observations and interview data support these claims. More extensive reference is made to interview data in order to further illustrate key points, or when there is disagreement with survey findings.

In chapter six, I have provided substantial amounts of excerpts from interviews to illustrate and elaborate upon, as well as justify, my findings or organizing system. Within this section, I have provided a number of interview excerpts to illustrate the dynamic nature of the phenomena being explained and to elaborate on the meanings of individual themes. Although I provide a explanation of my interpretations (organizing system), readers must also reference individual excerpts to gain a comprehensive understanding of the big picture. Additionally, I include interview excerpts as a justification of my interpretations. In order to demonstrate that my use of data was not selective, I have chosen excerpts that demonstrate the overall range of variation in the

phenomenon (different themes), and show the range of variation with respect to the manner in which individuals expressed specific themes. When appropriate, I have also included and discussed excerpts that demonstrate exceptions to the organizing framework. For instance, commitment is characterized as a necessary characteristic for the successful implementation of the initiative, but 'over' commitment was also discussed as a potential barrier.

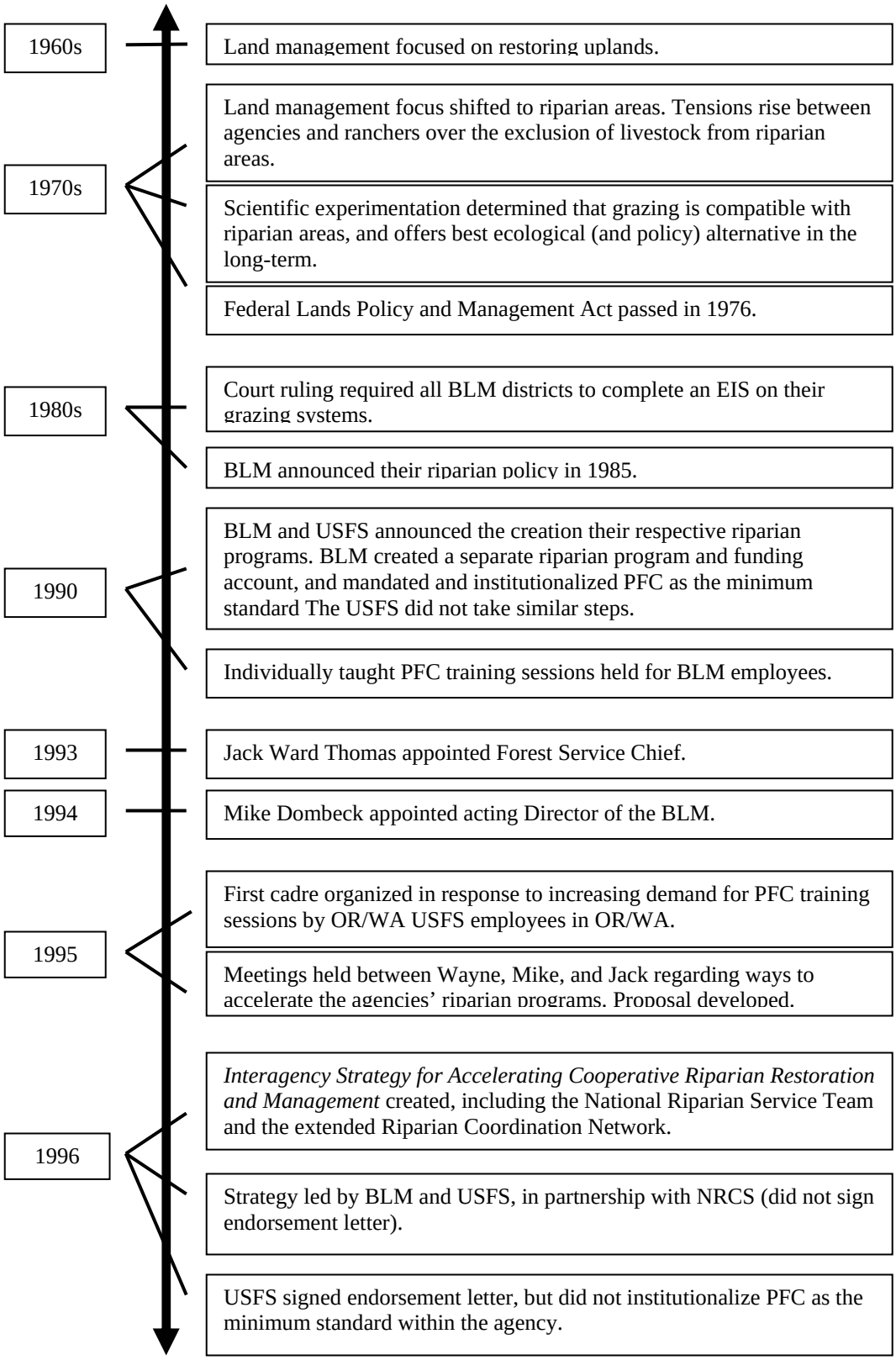
Chapter Four: Development of the Riparian Initiative from a Historical Perspective

Introduction

This chapter provides a general outline of the changing trends in land management, over a period of approximately 40 years (see Figure 2), that led to the creation of the riparian initiative. An understanding of the historical development of BLM and USFS riparian policy provides the reader with a context for situating future discussions regarding the effectiveness of the initiative. The first chapter section, entitled 'The Changing Focus of Land Management Agencies,' provides a summary of interview responses regarding the historical development of riparian management and the creation of the *Initiative for Accelerating Cooperative Riparian Restoration and Management*. Although most respondents provided at least some historical background, not all respondents addressed the same time period or the same topics. When viewed across interviews, a story began to unfold with each respondent contributing a unique 'piece of the puzzle' so to speak. In reading this section, it is important to note that the technical accuracy of the information, in terms of dates and the specific sequencing of events may be incorrect at times because it is affected by an individual's ability to recall the past.

The second chapter section outlines a description of the initiative in terms of the goals, objectives, tools, and processes used. This description is included as part of the study results because I rely upon data gathered from interviews and participant observation to refine the description of the riparian initiative provided in the NRST's original strategic plan (1997). Although the original strategic plan outlines the general nature of the riparian initiative, it does not provide explicit detail regarding the activities associated with initiative implementation.

FIGURE 2: Timeline



The Changing Focus of Land Management Agencies

During the 1960s, land management agencies were not focused on the protection and management of streams and riparian areas. Rather, their major emphasis was on the restoration of the uplands. Although increased rates of erosion and rising sedimentation levels in streams were a concern, the general feeling among agency employees was that the best way to address these issues was through the implementation of strategies designed to stabilize the uplands. Most land managers recognized that "things run downhill," and the uplands were in a deteriorated state due to a history of bad land management decisions on the part of both public and private landowners (i.e., 100 years of overgrazing and the over-harvesting of timber). Furthermore, during the 1960s, the agencies were involved in the re-adjudication of Federal lands grazing permits. In turn, an upland focus dovetailed very well with the other priorities that the agency had at that time.

The primary focus of upland restoration projects was the re-vegetation of these areas, in an attempt to slow the rates of erosion on these lands. Overall, these projects were largely successful in terms of decreasing the sediment load that was being carried by neighboring streams and rivers. However, over the years, a number of people have criticized the agencies' decision to address erosion issues by focusing specifically on the uplands rather than taking a more integrated approach (one that looked at both upland and riparian areas – and how they are integrated). One member of the Utah cadre, argues that the decision to focus solely on upland areas was the result of a "crisis reaction," and "hindsight is always 20/20." Specifically, this respondent states,

> On rangelands, everyone says that we've ignored riparian, and it's true. But I don't think you can blame the profession for ignoring riparian lands….When you have a problem, you have to start somewhere. We started on the uplands [because they comprised] 98% of the [land] area…People ignored the riparian zone because it was only 2 %, not because they were being foolish…I think we need to quit blaming the history, and blaming people in the past for being so short-sighted. It was a crisis reaction….Now we actually have the luxury to go, "Oh, wait a minute," and we're now realizing the importance of that 2% [riparian areas]. But, until we solved [the upland] problem, we would never have been able to see this problem, in my opinion.

By the early 1970s, the focus of land management agencies began to shift away from the restoration of the uplands toward more of a concern for the protection and management of streams and riparian areas.[8] One of the primary reasons for this shift was the fact that issues regarding anadramous fish, a number of which were eventually placed on the threatened and endangered species list, were beginning to 'heat up.' At this time, the objective was to manage riparian areas in order to maintain fish and wildlife habitat. In turn, the responsibility for the management of these areas was placed in the hands of agency fish and wildlife biologists.

The general sentiment among agency biologists during the early 1970s was that members of the range staff, as well as ranchers themselves, viewed riparian areas as 'sacrifice zones.' In others words, they were not concerned with protecting or managing these areas appropriately. As a result, fish and wildlife biologists (who were responsible for managing these areas) did not make much effort to work with members of the livestock community to develop grazing systems that were compatible with riparian areas, rather the objective was to fence cows out. Most of the early funding for riparian

[8] It is important to note that many would argue that this did not reflect an integrated approach because the management of riparian areas tended to replace or overshadow the management of the uplands.

management was directed toward the exclusion of livestock from these areas. This greatly upset many Federal lands grazing permittees, and led to rising tensions between the livestock community and Federal land management agencies. According to Wayne Elmore, the current leader of the National Riparian Service Team,

> I used to get death threats….I had a rancher try to drag me out of a pickup and beat me with a tire iron. He tore my shirt…For fencing a creek out, my boy got harassed in school…It was tough times working on creeks in the 70s.[9]

Members of the livestock community were deeply angered over riparian exclosures for a number of reasons. First, ranchers were opposed to riparian exclosures because they afraid of losing their legal water rights (which equates to power in the American West). According to Wayne,

> people [ranchers] were against fencing off creeks…because it was tied to this old feeling, which a lot of the ranchers still have today, that he who controls the water controls the land….So the underlying [concern] was that we were taking control of the most precious resource we had, because without the water there would be no grazing in the west.

Second, ranchers didn't see any reason for the exclosures because they felt that the creeks had always looked that way (i.e., that they weren't degraded). According to Jack Ward Thomas, this perception was essentially correct, "[a]ll of the riparian zones were so overgrazed by livestock, that we'd come to look at that as the normal state."[10] Finally, ranchers were concerned because riparian areas produce disproportionately high amounts of biomass. Thus, ranchers were often losing their most productive forage behind fences - a cost that most livestock operators were unable to bear long-term.

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[9] Quotation taken from interview text.
[10] Quotation taken from interview text.

Given the increasing importance of these debates over riparian-grazing issues from both an ecological and a socio-economic perspective, a number of riparian-grazing studies were undertaken at the Starkey Experiment Station on the La Grande river during the 1970s. These experiments were designed to look at a range of grazing systems in terms of riparian impact, including: (1) total protection, or exclosures, (2) the removal of livestock at a particular stubble height, and (3) other grazing systems, such as rotation grazing. According to Jack Ward Thomas, one of the principal investigators, the findings of these studies demonstrated that riparian areas could essentially be improved under all three grazing strategies. Rather than excluding livestock from riparian areas in perpetuity, the key was to remove the cows before they completely 'hammered' an area. Furthermore, these studies demonstrated that riparian-grazing (e.g., using rest rotation principles) was actually a more viable long-term riparian management strategy than exclosures, because it helped prevent the accumulation of dead biomass in these areas.

In addition to examining the impacts of various riparian-grazing systems, there was also a push within land management agencies (particularly the BLM) to better understand the ecological functions that streams and riparian areas perform. By the late 1970s, it was becoming widely recognized that streams and riparian areas perform a variety of ecological functions and, in turn, provide a number of values beyond simply the provision of fish and wildlife habitat (e.g., livestock forage, water storage, clean water, etc.). According to Wayne Elmore, the impact of this knowledge was that agency employees recognized the need to change the way they talked about creeks. Rather, than trying to convince members of the livestock community that they should manage streams and riparian areas in order to provide fish and wildlife habitat, he began talking to

ranchers about what he thought creeks did for them. The BLM's Proper Functioning Condition (PFC) assessment method, which was in the initial stages of development during the late 1970s, "grew out of this recognition" (Elmore).[11]

Between the late 1970s and the early 1980s, a number of changes occurred within the BLM that pushed riparian issues even more into the spotlight. First, in the early 1980s, the Natural Resource Defense Council sued the BLM because they were in violation of the recently passed Federal Lands Policy and Management Act (1976), and won. As a result, each BLM district was required to write at least one environmental impact statement (EIS) on their grazing management systems. Within the EIS, the impact of grazing on riparian areas had to be considered. This led to a big push in the BLM to conduct resource inventories (soil inventories to classify all the lands, and riparian inventories) in order to document impact.

In addition to growing tensions between the environmental community and the BLM over riparian issues, tensions were also increasing between the livestock community and the BLM. First, members of the livestock community felt increasingly threatened by the number of regulations that were being imposed on riparian-grazing systems. Second, tensions between ranchers and BLM employees were also on the rise because ranchers were increasingly being forced to bear the costs of maintaining exclosure fences. Previously, the creation and maintenance of exclosure fencing had been financed with funds drawn from agency wildlife budgets.

Given the growing importance of riparian and grazing issues, the BLM announced its riparian policy in 1985. Although riparian concerns were beginning to take hold in the

[11] Quotation taken from interview text.

BLM, the USFS was not as willing to make riparian issues a priority at this time. Wayne Elmore recalls being frustrated because,

> the BLM could do all kinds of stuff on their lands, but, because we have scattered ownership and we never worked with the Forest Service that much, when the water left the green on the map then it was somebody else's water to worry about. We'd do things (restoration) on our land (and get recovery) and then we'd get blown out or something would happen that [would ruin the project].[12]

By 1991, the BLM and the USFS had both jumped on the 'riparian bandwagon,' as evidenced by the announcement of their respective riparian programs. The overarching goal of these programs was to improve 70-80% of riparian areas on Federal lands. However, the implementation of these programs differed between the two agencies.

First, the BLM created a separate riparian program and funding account as part of their 'Riparian Wetland Initiative for the 90's.' The creation of a separate program and budget made it easier for the Bureau to track accomplishments and write directives for the management of riparian areas. Second, the BLM mandated 'Proper Functioning Condition' as the minimum standard for riparian areas. This resulted in a coordinated effort across BLM districts to assess the condition of their riparian areas, and compile baseline information that was comparable across districts. Finally, the BLM supported this mandate by institutionalizing PFC. Not only were dollars and targets assigned to the completion of PFC assessments, but the Bureau also incorporated PFC as a minimum standard for riparian health within the livestock standards and guidelines. As a result,

[12] Quotation taken from interview text.

PFC became an accepted measure within the BLM, one that could be easily incorporated into new programs.

Compared to the BLM, the Forest Service did not take similar steps to integrate their riparian program into their organizational structure. First, the Forest Service did not make the same efforts, organizationally or financially, to identify 'riparian' as a program. Second, the Forest Service did not mandate or institutionalize a minimum standard for riparian areas within their agency. As a result, by the early 1990s a standardized method for assessing riparian health still did not exist *within* the Forest Service; and one certainly did not exist to assist collaboration on riparian issues and management between the Forest Service and the BLM.

Between 1993 and 1996, a number of national and field level issues surfaced that eventually led to the development of the *Interagency Strategy for Accelerating Cooperative Riparian Restoration and Management*. First, there was an increasing public demand (raised through elected officials) for accountability in government. Regarding riparian management, both the BLM and USFS riparian programs had been in place for a number of years and there was a push to evaluate their accomplishments. According to one interview respondent, the Forest Service "was hard pressed to report much of anything because they did not have a very good tracking system." Since the BLM had taken a number of steps to integrate both the riparian program and PFC within their organizational structure, they were able to provide information on the condition of the miles of streams that had been inventoried using the PFC methodology. However, this same respondent notes that they were unable to "detect measurable progress at that point in terms of changing conditions [on the ground]." Given this situation, Mike Dombeck,

who became the acting Director of the BLM in 1994, was determined to find a way to accelerate the agency's riparian program.

Second, the use of non-standardized methods between Federal land management agencies also presented a barrier to the implementation of ecosystem based planning efforts. By the mid 1990s, land management agencies were beginning to shift toward more of a 'watershed thought process' or a focus on ecosystem management. Ecologically speaking, this shift in focus forced land management agencies to view the landscape as a connected whole, rather than as separate ecological or jurisdiction units. Although such a focus made sense intuitively, the application of this concept proved difficult because institutional identities, histories, and administrative barriers resulted in the collected of riparian data that were inconsistent and incomparable across agencies. For instance, one of the notable setbacks to the Interior Columbia Basin Ecosystem Management Project was the fact that researchers were unable to analyze most of the riparian data because of the historical reliance on different methodologies within and between agencies.

In addition to viewing landscapes as complete ecological units, a 'watershed thought process' also required the consideration of both sustainable environments and sustainable economies. Once again, this thought process made sense intuitively. However, Jack Ward Thomas, who became Chief of the Forest Service in 1993, notes that it was increasingly becoming more and more challenging to apply this thought process in relation to riparian-grazing issues. According to Thomas, as the listing of anadromous fish as threatened and endangered species became more of a concern, the

solution was increasing becoming one of "just shut down the grazing operation."[13] Given his previous experiences at Starkey, Dr. Thomas knew that it was ecologically feasible to have healthy riparian areas and keep ranchers on the land. However, he was unsure of how to organize a program to facilitate the development of riparian compatible grazing systems across a variety of landscapes, given a range of permittee constraints. "So I began to look around for people who were able to do it. The person that I knew who could do it better than anybody else was a guy named Wayne Elmore, who worked for the BLM" (Jack).

Meanwhile, at the field level, Wayne Elmore continued to work on integrating PFC within the BLM. Since the BLM had adopted PFC as its minimum standard in 1991, there was a push to get BLM employees trained in the PFC assessment method. By 1995, the demand for PFC training had further increased. At this time, the USFS was under pressure to do NEPA assessments on their grazing allotments, which meant a lot of analysis had to be done on the ground. PFC was seen as an assessment tool that could help meet the needs of the NEPA workload, and a number of USFS districts in the northwest began requesting training. Prior to this point, PFC training sessions had been primarily taught by one instructor but, in 1994, an interagency (USFS, BLM), interdisciplinary training cadre was created to meet the growing demand for training sessions in Oregon and Washington.

In 1995, USFS Chief Jack Ward Thomas, BLM Director Mike Dombeck and Wayne Elmore began to meet and discuss alternative solutions to the myriad of issues facing the agencies, including the need to (1) accelerate the agencies' riparian programs,

[13] Quotation taken from interview text.

(2) to employ a consistent minimum standard and assessment methodology across agencies, and (3) to devise riparian management strategies that were both ecologically and economically sustainable. These discussions were a critical turning point in the historical development of the *Interagency Strategy forAccelerating Cooperative Riparian Restoration and Management*. When asked to provide his insight regarding potential solutions, Wayne Elmore suggested that "we need to train a critical mass of people in the West."[14] Elmore argued that if the agencies trained their employees and members of the broader community in a method for understanding and assessing riparian systems (PFC), those individuals would then use that understanding to help achieve changes in management. Wayne also stressed the importance of creating a joint effort between the two agencies, and involving those individuals who were most affected by management decisions.

On September 25, 1995, USFS Chief Thomas and BLM Director Dombeck received Wayne Elmore's proposal outlining the *Interagency Strategy for Accelerating Cooperative Riparian Restoration and Management*. This strategy called for the creation of an interagency team of riparian management experts that would be permitted to work on both BLM and USFS land. The National Riparian Service Team would focus on providing training and technology transfer, consulting and advisory services, and program review. The strategy also called for the creation of an extended riparian coordination network, including training cadres in the 11 western states and riparian program coordinators from each agency. According to Jack Ward Thomas,

[14] Quotation taken from interview text.

> [Mike and I believed that] we could get some really remarkable results if we just threw out the rules, and threw out the organizational charts, and put the best people that we had on the job. So, both of us being extremely naïve, and not having come up through the appropriate bureaucracies to understand all the reasons why we couldn't do what we wanted to do, we simply did it.[15]

On November 8, 1995, at a briefing of the Forest Service national leadership team, USFS Chief Thomas and BLM Director Dombeck formally announced their intention to implement the proposed cooperative riparian management strategy. As Wayne Elmore recalls,

> Jack said, this [proposal] will be coming around for your review, and you'll be able to comment on it, but I can tell you right now that Mike and I have already decided. This is not a question of if we're going to do it, it's only how we're going to do it. So, do not turn in any comment that says dump it.[16]

Following this briefing, Jack met with Paul Johnson, the Chief of the Natural Resource Conservation Service (NRCS) to encourage their involvement. Johnson agreed to add the NRCS to the interagency strategy as a 'cooperating partner.' This expanded the influence of the strategy by incorporating private as well as public lands. However, Johnson refused to sign the endorsement letter, or devote a full time employee to the NRST. Furthermore, PFC was not mandated as the minimum standard for riparian areas within the agency nor were financial resources committed to implementation efforts.

Although participation in the interagency riparian strategy and the use of PFC was mandated within the Forest Service in 1996, the idea was "not widely accepted inside of the Forest Service, particularly in the Washington Office" (Jack). According to Jack, this lack of acceptance was a consequence of the fact that "people were just too hung up on

[15] Quotation taken from interview text.

chains of command, and lines of authority. Doing something like that, something that had never been done before, seemed to be a hell of a mind stretch." However, others attribute lack of acceptance to the fact that it was a top down decision within the Forest Service. Rather than working to instill ownership in the strategy and PFC at various levels within the agency, Wayne worked primarily with the Chief and field level employees in Oregon and Washington. As a result, interview respondents indicate that there was less buy-in from middle management and Forest Service employees on districts outside of Oregon and Washington. Furthermore, the Forest Service never institutionalized the initiative or PFC within its organizational structure. In turn, there has been little incentive motivating Forest Service employees to participate in the strategy or adopt the PFC methodology. In contrast, both the strategy and PFC were well accepted within the BLM. Interview respondents attribute high acceptance levels within the BLM to the fact that PFC had historically been considered an accepted method and standard within the Bureau.

Overview of the Riparian Initiative

Goals and Objectives

The overriding goal of the interagency strategy is to create and engage a 'critical mass' of people, representing diverse interests and affiliations, in the cooperative restoration and management of riparian areas across jurisdictional boundaries. There are three primary objectives under the larger goal of accelerating cooperative riparian restoration and management. The first objective is to increase awareness of the

[16] Quotation taken from interview text.

importance of riparian areas and understanding of riparian function among individuals and groups representing diverse interest and affiliations across a broad geographical area. The second objective is to bring diverse groups of people (employees from various Federal, state, local and Tribal agencies, ranchers, environmentalist, etc.) together (through service trips and PFC training sessions) to establish a common vocabulary, focused on stream function, for sharing their views on riparian processes, conflicts and alternative management actions. The final objective is to provide a standardized method and common understanding as a basis for improving riparian health through coordinating riparian restoration and management activities across jurisdictional boundaries.

Tools and Processes

In order to meet the goals and objectives of the initiative, two primary tools are used: the PFC assessment method and the riparian coordination network. These tools will be discussed in turn.

Proper Functioning Condition (PFC) Assessment Method

First, the term 'PFC' is used to describe both the on-the-ground condition of a riparian-wetland area and an assessment process. The on-the-ground condition termed PFC refers to how well the area's physical processes are functioning. PFC is a state of resiliency that will allow a riparian-wetland area to hold together during moderately high flows, such as 5-,10-, and 20-year events, sustaining that systems' ability to produce

values related to both physical and biological attributes. When systems are below PFC, they are not in a sustainable condition.

As an assessment tool, the PFC process provides a qualitative and standardized approach for assessing the physical functionality of riparian-wetland areas. It can be applied in a variety of settings to gain consistent information that helps people discern what is working well, what may be limiting, how management could be improved, or what further evaluations might be appropriate. Through identification of limiting factors, the results of the assessment can be used to design focused monitoring strategies. Furthermore, the PFC ratings of streams within a watershed can guide the prioritization of restoration and management activities to those areas with the highest probability for positive change with reasonable investment.

The PFC assessment also serves as a communication tool that provides common terms, definitions and concepts important to building an understanding among diverse stakeholders. The process, which uses an interdisciplinary team approach to examine the interaction of hydrology, vegetation, soils and land form characteristics, allows individuals to synthesize information that is required for determining the overall health of these systems. It is also a critical step in having participants put aside their values and interests and first focus on the physical attributes and processes from which benefits are produced.

Riparian Coordination Network

The second component of the riparian initiative is the riparian coordination network. Following the endorsement of the riparian initiative in 1996, the National Riparian Service Team, whose mission is 'Healthy Streams through Bringing People Together,' was created to lead the implementation of this strategy. In order to assist in this effort, the NRST created a network of people who support and carry out initiative activities. The riparian coordination network is composed of the NRST, agency riparian program coordinators (BLM, USFS, NRCS) and the state cadres, which include agency and non-agency members.

Each of the three components of the initiative had a specific set of roles and responsibilities in relation to the riparian initiative. The NRST works full-time on initiative activities, while the riparian coordinators and state cadres have committed to these responsibilities in addition to their normal full-time jobs. The NRST works to maintain the network, as well as provide training and consulting services to diverse groups. They also work to build support for the strategy by fostering communication among local, regional and national levels and work to integrate the strategy into national agency agendas. The agency riparian coordinators support the state cadres and help integrate the initiative within and across agencies, as well as with outside interests. Finally, the state cadres work at the local level to organize diverse groups of interested participants and provide PFC training sessions at various intervals during the year. In the remainder of this section, I provide a more detailed discussion of the NRST and state cadres' roles and responsibilities. I have chosen to highlight the NRST and state cadres

because they are actively engaged in implementation efforts, whereas the agency program coordinators provide more of a supporting role.

The National Riparian Service Team (NRST) and Service Trips

The NRST is comprised of seven members, a soil scientist (USFS), a hydrologist (USFS), an ecologist/grazing specialist (BLM), a fish biologist (BLM), a public affairs specialist (BLM), a team coordinator (USFS) and a team leader (BLM). The group functions as a self-directed team, in so far as individual team members are frequently able to choose the tasks they want to work on. However, there is a lot of communication within the group, and most decisions are made informally as a group, so there is a large degree of coordination among team members.

The NRST has three main responsibilities. The first is maintain the riparian coordination network. The second is to engage in outreach efforts designed to increase awareness regarding the riparian initiative and the importance of riparian function among all conceivable stakeholders (e.g., local, state and federal agencies, user and interest groups, and private landowners). The final NRST responsibility is to provide training and consulting opportunities to diverse groups regarding a variety of riparian-wetland issues.

One of the ways in which the NRST works to maintain the riparian network is by providing various forms of support to the state cadres. For instance, they host 'Train the Trainer' sessions where potential and existing cadre members are trained to teach PFC and provided with materials (slides, handouts, brochures, technical manuals, etc.) needed

to host a PFC training session. Additionally, NRST members spend a portion of time each field season assisting cadres with their PFC sessions. Finally, the team works to keep the lines of communication open within the network by sponsoring cadre conference calls before and after each field session and hosting biannual network coordination meetings.

Regarding outreach, the NRST has a number of efforts underway designed to increase awareness of the initiative as well as riparian function. For instance, the team has an outreach program that consists of a quarterly newsletter, which is sent to network members and other individuals who have expressed interest, and the maintenance of a web page. Additionally, various team members provide presentations at conferences and meetings, as well as present political briefings as requested by federal and state government employees. Finally, team members are in the stages of preparing products and documents to further the use and understanding of the riparian initiative including the 'Five Year Accomplishment Report' and the 'Revised Strategic Plan.' Additionally, they are working to complete technical references that link PFC assessments to the development of management and monitoring plans. These products include a grazing management technical reference, a road stabilization and bioengineering guide, and a biological analogue that links riparian function to the attainment of specific aquatic habitat requirements for fish species.

The third responsibility of the NRST is to provide training and consulting opportunities. Initial efforts were geared to the provision of PFC training sessions in an effort to establish the riparian coordination network. Since most of the western states now have organized cadres, the team's focus has shifted toward providing consulting

services (service trips) to defined groups, with the intention of moving individuals beyond conflict to riparian restoration.

The NRST receives a variety of requests for training and consulting services (service trips). Typically, requests are from groups in various stages of development who want to find a common way to discuss, assess and manage their streams. Another category of requests regards situations where groups/individuals are facing or are currently involved in litigation. Requests for NRST services are filtered through the team coordinator. The team has established a series of guidelines according to which requests are ranked in terms of priority. These guidelines are relatively simple and they focus on ensuring that (1) all stakeholder groups are represented during the service trip, and (2) the group's objectives fit within the team's mission.

For all intents and purposes, service trips are actually a mixture of training and consulting services with the goal of providing a 'safe environment' for discussing and resolving contentious issues. Often times, requesters want the NRST to consult on a problem; however, the problems they're having are usually pretty contentious and groups are often unable to communicate with each other. That's where the 'PFC philosophy' comes in. Interview respondents note that PFC provides a safe environment for addressing contentious issues because it is a common vocabulary that is not tied to the issues on the table (e.g., lack of fisheries habitat, overgrazing by cows). This statement reflects the purpose of PFC, as outlined in the section entitled 'Tools and Processes,' which is to get participants to focus on what they have in common (i.e., a shared interest in the condition of the resources, specifically a concern for riparian function) before

engaging in a discussion regarding the attainment of specific values. According to Wayne Elmore,

> what we do is go in and work with people, and teach them a way to talk about a stream one-on-one without ever mentioning the values that they personally want that stream to produce….A lot of times there's been a resolution of conflict simply by looking at streams in this way.[17]

The team's objective is to get participants to work together to bring a stream to a sustainable condition before discussing the desired future condition of that area (or the values and uses they would like to see that area produce). The reason for this is simple. Team members note that it is pointless to try and manage a stream for the production of certain resource values (e.g., fish and wildlife habitat, livestock forage, clean water, etc.) if the stream is not in a Proper Functioning Condition. They argue that a discussion of whether or not to graze a system is irrelevant if that system is going to fall apart during moderately high flows (i.e., a 10-30 year event). The focus of that conversation, instead, should be trying to remedy those factors that are precluding that system from achieving a sustainable condition. As Wayne Elmore notes, "its identifying what is limiting, and sometimes its cows, or roads, or mines, or a number of other things, and changing what's causing the system to go downhill is what you have to do first."[18]

Using PFC, the team establishes a common understanding within the group regarding the physical processes of streams and what they need to function properly. Rather than automatically pointing fingers at user groups, or arguing about what use values people want to see produced on the ground, or designing solutions intending to fix whatever groups perceive to be broken, the NRST first introduces the concept of PFC to

[17] Quotation taken from interview text.

the group. The group then conducts PFC assessments in the area, and identifies limiting factors. Once the group has reached agreement on the factors that are limiting stream function, management changes or restoration activities are recommended (not required or forced) on the basis of stream and riparian function.

The NRST has worked primarily within the western United States, although they have conducted service trips in Alaska, Mexico, Canada and a number of eastern states as well. Additionally, there are currently cadres in existence within each of the western states (AZ, NM, NV, UT, WY, CA, CO, MT, ID, WA, OR) and British Columbia. The NRST is also working to develop additional cadres in the Dakotas, Oklahoma, Kansas, South Carolina and Texas.

State Cadre and PFC Training Sessions

Like the NRST, each cadre is composed of a cadre coordinator, who leads the cadres and organizes training sessions, and interdisciplinary set of instructors. Although the cadres are primarily composed of federal agency employees (primarily BLM, USFS and NRCS), there are some state agency employees and a few private participants (e.g., university extension, environmentalist, rancher) as well.

Occasionally, key cadre members will accompany the NRST on a service trip or provide training sessions that link PFC assessments to management techniques (e.g., riparian grazing courses), but for all intents and purposes they function as a PFC training team. The cadres conduct PFC training sessions that are very similar in design to the

[18] Quotation taken from interview text.

service trips sponsored by the NRST. The two main differences are that cadres take more of a 'shotgun' approach to soliciting interested participants, and the sessions are formatted as training workshops rather than problem solving assistance trips.

At the beginning of each field season, cadre coordinators pick a variety of locations for hosting a PFC workshop within their state. At a minimum, they pick the location, advertise and see who shows up. Some of the more effective cadres conduct concerted outreach efforts prior to the session, in order to solicit the involvement of diverse individuals to participate in PFC workshops (which typically follow a pre-set agenda). Workshops typically last two days, and are traditionally organized in such a way that participants spend one day in the classroom learning about PFC and one day at various field sites conducting assessments. In an effort to simulate a problem solving environment (as is present in service trips), the large group is usually broken into smaller interdisciplinary groups to do the in-class and field based assessments. The objective is to place individuals in situations where they are able to learn from and communicate with people outside their office and/or discipline. Once assessments have been completed the smaller groups present and discuss their ratings and reasoning with the larger group.

Summary

I first presented a historical overview, in an effort to provide the reader with a context for understanding how the riparian initiative developed with the three sponsoring land management agencies (BLM, USFS, NRCS) and the problems it faced (and continues to face). Within this section, I described the evolution of riparian policy within

federal land management agencies, which culminated with the creation of the riparian initiative in 1996. One of the important pieces of information to be gleaned from this section is the fact that, due to a range of historical factors, there was varying levels of support for the riparian initiative across the three agency 'sponsors.'

Specifically, the riparian initiative was most widely accepted within the BLM because the PFC assessment method was considered a Bureau tool[19] and that agency has been using it since the early 1990s. The riparian initiative was less supported within the Forest Service because the use of PFC was a top-down decision that didn't sit well with certain individuals at the field or middle management levels within the agency hierarchy. Furthermore, unlike the BLM, the USFS did not institutionalize the riparian initiative or the PFC assessment method. As a result, there has been little incentive motivating Forest Service employees to participate in the interagency strategy or adopt the PFC methodology.

Finally, the NRCS has historically been the least supportive of the riparian initiative as evidenced by the agency's unwillingness to sign the official endorsement letter, to mandate the use of PFC, to commit a full-time employee to the NRST, and to contribute funds to implementation efforts. However, they have been good participation at the field level (a number of NRCS employees participate as state cadre members) even without this W.O. support. For instance, The Northern Plains Region Intermountain Riparian-Wetland Resource Technical Team devoted a significant amount of time to

[19] It is important to note that this method was developed and tested by an interdisciplinary group of people (approximately 50), with diverse affiliations (BLM, USFS, NRCS, USGS, university specialists, etc.). However, the final method was stamped with the BLM's insignia. As a result, many people now view it as a BLM tool.

working with the NRST in training, technical reference development, and consultation activities. Furthermore, the NRCS funded various NRST training sessions and riparian area improvement projects with money they had received through the Environmental Protection Agency's (EPA) 319 grant program. This demonstrates the fact the NRCS did provide support for the riparian initiative at the local, state and regional level in the Northern Plains region. Additionally, there was state and local NRCS support for the riparian initiative in the Western region. What was lacking was national support (and regional support in some areas).

In addition to outlining the historical development of the riparian initiative within this chapter, I have also provided an overview of the goals and objectives of the riparian initiative, as well as the tools and processes employed to meet them. For all intents and purposes, this section presents an 'ideal type' of the riparian initiative. The construction of an 'ideal type' provides a means for comparing what the initiative is trying to do, and what is actually happening within the program. Given the expanse of the riparian initiative, I chose to focus specifically on the implementation component of the strategy (NRST and service trips, state cadres and PFC workshops) rather than the support component (agency riparian coordinators). After reviewing the interviews, however, it seems that agency and supervisor support for the riparian initiative is a critical factor in determining its success. This and a number of other factors influencing success are discussed at length in chapter six.

Chapter Five: Measuring Success

Introduction

Within the following chapter, I outline an evaluation of the riparian initiative according to dimensions of success that were identified by interview respondents. Although each interview respondent was asked to comment specifically on the success of the riparian initiative, the categories identifying different dimensions of success emerged holistically. In other words, respondents identified and elaborated upon the various ways they thought about success throughout the interview and in relation to a number of topics. When viewed across interviews, four dimensions of success emerged. These dimensions include: the existence of a functioning riparian coordination network; the achievement of increased awareness; the provision of quality services (e.g., service trips, PFC workshops); and evidence that participants have adopted initiative principles which are aimed at improving cooperation and riparian health.

In the remainder of this chapter, I document the significance of each dimension and then discuss the extent to which the initiative has demonstrated success in that category. As previously noted, there are two distinct dimensions of the riparian initiative, namely the NRST, who typically conduct service trips, and the state level cadres, who typically sponsor PFC workshops. Within the following section, I discuss each of these two dimensions of the riparian initiative separately. It is important to remember that the four dimensions of successes addressed in this section were not identified prior to the survey design; rather, they emerged as important dimensions based on an analysis of the interviews. Although the four dimensions of success were each addressed to some extent

within the survey portion of the evaluation, the two surveys (service trips and PFC workshops) differed in their design and are not directly comparable to each other.

Study findings indicate that there have been notable case-by-case examples of success as a result of service trips. The PFC workshops, however, have not led to the type of large-scale success in terms of increased cooperation and improved riparian health as initially envisioned. I conclude chapter five with a summary of the evaluation findings and a review of the barriers to success that were identified by survey respondents. This discussion is expanded in chapter six, where I provide an analysis of the interviews in terms of individual and institutional level factors that facilitate and constrain the success of the riparian initiative.

Evidence supporting the conclusions identified in this chapter was drawn from interview and survey data, as well as personal observations. In order to reduce repetitiveness, I occasionally highlight survey responses and interview excerpts that have been included in future sections to illustrate and justify my analysis. I decided to leave the excerpts where they are rather than moving them forward in the document, because I believe that they best represent the discussions within sections in which they are placed.

Dimensions of Success

The Existence of a Functioning Network

The first dimension of success identified by interview respondents relates to the riparian coordination network. In short, respondents note that a well functioning team or cadre is a prerequisite for achieving success in other dimensions. In the remainder of this

section, I will discuss how respondents define ‘well functioning’ and why they see the NRST and various state cadres as functioning ‘successfully’ or not. I also provide a comparison between the Colorado cadre, which network members consider to be one of the more successful cadres, and the Utah cadre, which is considered to be having less success.

National Riparian Service Team

Based on interview data, personal observation, and survey responses, the NRST is functioning successfully as a team. First, the team members perceive themselves to be functioning successfully as a team. That is not to say that they haven’t encountered difficulties functioning as a group, but that they claim they always find ways to constructively and respectfully address such issues (see T12-8). Additionally, network members commonly perceive the NRST to be functioning effectively (see T24-1, T25-1, T12-10, 11, 14, 15 and T29-4). Of the 22 non-NRST interview respondents, only three identified potential or existing problems with the team (see T27-1, and T30-1, 2): ‘over’ commitment in terms of a reliance on PFC and a high-powered reputation.

After working closely with the NRST for the last three and a half years, my personal observations also substantiate this conclusion. In my opinion, they command an amazing ability to visually determine and predict the dynamics of unique stream systems. Furthermore, they can integrate and convey complex scientific information to individuals with diverse levels of knowledge and experience, in such a way that the contributions of each individual are valued and respected.

Service trip survey results provide a third level of evidence to substantiate the claim that the NRST is a functioning team. In addition to answering specific survey questions (see Graph 3), nine of the 37 respondents (24%) chose to volunteer additional information regarding satisfaction with the team, such as: “great staff to work with;” “the team is so great - they did so much for us;” “respected [NRST’s] ability to communicate with everyone on the trip;” “the team has shown me nothing but great customer satisfaction;” “the team was excellent - each member was knowledgeable on the full range of activities associated with the subject matter;” “the NRST did a great job, our expectations were exceeded;” “the NRST has an exceptionally well qualified staff - they are knowledgeable, experienced and communicate very effectively;” “it’s the best in the nation;” and “excellent in all respects.”

Although there is general agreement that the NRST is currently functioning successfully as a team, members have expressed concern over the impacts of the ‘hectic schedule,’ including the inability to complete service trips in a timely fashion, to provide cadre support, and to properly conduct team planning. The evidence for this statement is primarily drawn from interview texts, and supplemented by service trip survey results and personal observations. For instance, the team’s schedule and need to spend more time in the office have been agenda items at each of the three annual team planning meetings that I have attended.

Team members note that because individual team members have a hard time refusing service trip requests, the team is often overbooked. Additionally, two service trip respondents voluntarily provided comments relating to the issue: “I have been

satisfied with the NRST - my sense, though, is that they are stretched too thin;" "we need more of you available to be on the ground." As previously mentioned (Chapter 4) the team has criteria in place for prioritizing service trip requests. However, the general trend has been that the coordinator will often work with a requester until they have assembled a diverse group of people and have defined workable objectives rather than refusing services. As a result, the team has responded to almost every request.

Given the busy field season, and large amounts of time spent traveling, the team has had difficulty following projects through to completion. Specifically, they have been unable to produce trip reports, which are given to service trip coordinators following completion of consulting services, in a timely manner. One service trip survey respondent notes, "we need your follow-up reports sooner. You should be provided with more stuff to speed up the process. I know you are working triple over time." The provision of follow-up reports in a timely fashion was a key discussion point at this years' (2002) planning meeting, because as of mid-December a number of trip reports had yet to be sent to service trip participants from the previous summer's sessions.

Beyond impairing their ability to follow through on service trips, the team's hectic schedule has also created additional problems. For instance, the level of support that the team gives to cadre members is minimal. Although they still hold biannual network meetings and provide on-site assistance to cadres, the network newsletter and semiannual cadre conference calls have been less consistent than in earlier stages of the network's development. One interview respondent specifically noted that he hadn't seen a newsletter in a while.

In an effort to address this issue, team members made a commitment at last years' (2002) planning meeting to ensure consistent communication with network members, particularly state cadres. The newsletter was re-initiated, and individual team members 'adopted' two or three state cadres as part of a larger communication strategy. The results of that decision were positive; however, the team has decided that an even more concerted effort to facilitate network communication is needed in the upcoming year (2003).

In addition to service trip and network concerns, the team's hectic schedule has resulted in less time available for the team to address and plan for their own internal issues. For instance, team members have expressed concern over the high demand for the team leader's (Wayne) time and services, and the amount of time that he is out of the office. This poses a tension because team members recognize that having Wayne on-the-ground (rather than in the office) confers a sense of legitimacy and, thus, impacts success (see T29-1, 2, 4). However, they also recognize that a team leader must also devote office time to leading the team and guiding their activities. According to one team member,

> "we need to structure the team [in such a way] that [team leader and coordinator] focus a little less on the chaos and a little more...[on] stepping back and developing a long range plan....We need to maybe focus a month of intensive work to decide, not where we're going to be in a year, but where we're going to be ten years from now."

Team members note that this has become more of a pressing concern recently, because the NRST is undergoing major personnel changes. One key team member retired during the past year, and Wayne himself is facing retirement soon. Team members argue that in order to ensure the continued success of the NRST, substantial

amounts of time must be dedicated to finding and mentoring replacements. However, in light of the large number of existing commitments, it is questionable whether there will be time to devote to such activities. As a result, the likelihood that the NRST will continue to function as effectively as they have in the past is somewhat uncertain.

Although the team has made attempts to address this issue in the past, a number of identifiable steps were made to correct the problem in this year's (2003) team meeting. Specifically, the team revisited and refined their service trip selection criteria. Team members also developed a system for more coordinated scheduling, one that ensures time in the office for the completion of trip reports and team planning/guidance.

State Level Cadres

Regarding state level cadres, one interview respondent notes that the mere fact that a functioning network has been created is a success because it relieves pressure from the NRST to host all of the training sessions on their own. On average each of the 11 state cadres conducts between four and five PFC training sessions per year. However, interview respondents also note that each cadre has different levels of effectiveness (see T12-8). Some are doing really well, while others are struggling to host even one training session per year. The remainder of this section summarizes interview excerpts pertaining to the 'functioning' of the Colorado and Utah cadres.

The Colorado cadre is considered, by network members (including NRST), to be one of the more successful cadres. This evaluation is based on the number of workshops they sponsor each year and the amount of time they have been able to devote to these activities. According to interview respondents, their success is attributed to a variety of

factors. First, the cadre has been fairly intact for a number of years and there is a good mix of NRCS, USFS, and BLM support and participation (see T11-6). The cadre is composed of diverse members both in terms of skills and affiliations (BLM, NRCS, and USFS), including 2 private members (rancher and environmentalist).

Second, the Colorado cadre also has a committed and motivated coordinator, which is critical to success. In part, the Colorado cadre coordinator has been so successful because he is well supported by his supervisor and given the time and funds needed to coordinate training sessions. As a result, he is able to take care of all the various details that go along with hosting a session. For instance, he decides where the year's sessions are going to be held and secures a local contact to help with the logistics, pick the field sites, and solicit local interest and support within their agencies and communities. Prior to each field season, the coordinator organizes a conference call with cadre members to discuss what worked last season, what didn't, and ways to improve the session. At this time he also reviews and schedules upcoming training sessions with cadre members.

In addition to organizing and scheduling the workshops, the coordinator also takes an active role in promoting training sessions. Rather than simply selecting a location for a training session and waiting to see who shows up, he spends time talking to people outside normal channels (e.g., Department of Transportation, oil and gas producers, watershed groups, landowners, Army Corps of Engineers, Environmental Protection Agency, county road and weed employees) trying to find out if there is interest (See T25-

5). His mode of operation is to contact key individuals within various groups to champion the training within their organization and to suggest other interested groups.

The third factor facilitating the success of the Colorado cadre is the fact that the group is composed of dedicated instructors (see T24-2), who are subject matter experts and good teachers. Some members are better teachers in a classroom setting, while others excel in the field; however, they all have the ability to connect with the audience as instructors. Specifically, they are diplomatic when they communicate to someone that they are wrong and why they are wrong, and they are able to get fairly complicated technical concepts across to people who don't necessarily have a strong science background. Furthermore, one cadre member notes that the inclusion of non-technically trained, private members, as opposed to just technically trained agency employees, on the cadre helps bring a "layman's understanding, or a different perspective when people start talking about riparian function."

Unlike the Colorado cadre, the Utah training cadre is not functioning as well. In actuality, a number of Utah cadre members themselves actually stated that they were not functioning at all. In contrast to the Colorado cadre, which has remained intact, the Utah cadre has undergone a number of personnel changes. Specifically, the original coordinator (under whom the cadre was very successful) retired a few years ago. He has since been replaced by a number of other coordinators who have had considerably less success re-invigorating the cadre (see T26-5, T11-3, 4, 5). This occurred either because the new coordinators were not committed to the task, or they were not given the agency support needed to fulfill cadre responsibilities. This, in addition to the previous account

given by the Colorado cadre, suggests the importance of the cadre coordinator or leader to a well functioning team.

Additionally, Utah cadre members note a problem with the fact that the cadre is composed solely of agency employees. Given the increasing workloads and job pressures currently facing many agency employees, cadre members are unable to commit to any additional responsibilities (see T23-3). Instructors have been unable to commit to teaching requested PFC sessions or participating in network activities (e.g., Train the Trainer, network meetings). The current cadre coordinator, Pam, has also been unable to fulfill the responsibilities associated with leading the cadre due to the demands associated with other aspects of her full-time job. According to Pam, success is more likely to occur if a private group led the Utah cadre, while agency employees functioned as instructors. "I'm already here for 12 hours. I'm thinking more and more that Utah needs to go to private groups to lead this effort" (Pam).

According to interview respondents, a 'functioning cadre' is an important dimension of success because it enables the achievement of future successes. Furthermore, the existence of a functioning cadre influences the way network members set aspirations. This is evident in a comparison between Colorado and Utah.

Rather than concerning themselves with ways to develop a functioning cadre, members of the Colorado cadre are focused on ways to improve the cadre's ability to be successful in other dimensions. For instance, the primary concern among cadre members is increasing diversity of participants through widespread and deliberate outreach efforts. They also have their sights set on devising different curricula to draw interest from participants outside the agency. For example, they have designed a

shortened PFC session to encourage landowner participation. Cadre members have also expressed interest in participating in efforts designed to move interested groups beyond PFC assessments to management projects.

In contrast, the Utah cadre is struggling to even organize as a cadre and teach a PFC session (to have a functioning cadre). Rather than looking for evidence of broad scale, cooperative riparian restoration efforts as an indicator of success, members of the Utah cadre are focused on small successes or 'baby steps'. For instance, they note that a success would be getting cadre members to attend a Train the Trainer session, or getting cadre members to assemble as a group and present a PFC session to some participants. Utah cadre members also note that a success would be to do an assessment with a community or to present sessions in the major regions of Utah, but they argue that this is a long-term goal that could be achieved 'somewhere down the road.'

The Achievement of Increased Awareness

A second dimension of success identified by interview respondents is increased awareness as a result of outreach and education efforts. As previously stated, the first objective of the riparian initiative is to increase awareness regarding the importance of riparian areas and understanding riparian function across a broad geographical area. The belief is that if individual awareness and understanding were increased, people would be more likely to properly manage their riparian areas. This would occur because individuals would understand how functioning riparian areas benefit them (including material benefits, such as adequate supplies of clean water, improved wildlife and fish

habitat, and increased amounts of livestock forage and/or the ability to maintain operational grazing allotments on Federal lands). In addition to understanding the benefits provided by functioning riparian areas, individuals would also understand what needs to be done to improve or maintain these areas in functioning condition, and how to accomplish that task.

Service Trips

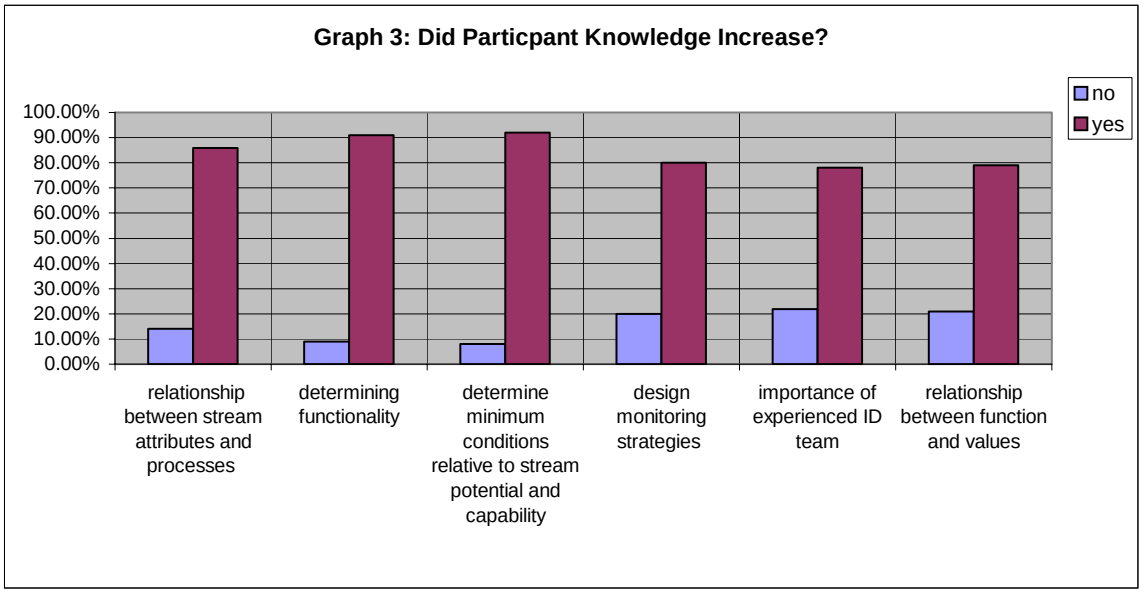
Regarding service trips, we used the number of trips held and people reached as an indicator of 'increased awareness.'[20] Between 1996 and 2001, the NRST participated in at least 125 service trips, which provided assistance to 2,500 additional people (NRST 2003). Additionally, interview respondents often highlighted the fact that diverse groups of people (agencies, landowners, cities, etc.) across a broad geographical area (across U.S. and internationally) have requested or participated in services trips as another indicator of success in this dimension.[21]

PFC Workshops

Regarding PFC workshops, over 325 PFC training sessions, which reached approximately 10,000 people, have been sponsored between 1996 and 2001. A second way in which 'increased awareness' was measured in the PFC workshop survey was through participant self-assessment of whether their knowledge of riparian function had

[20] This measure was refined further in the PFC Workshop survey, in an effort to measure consequence (or quality) in addition to reporting outputs (quantity).
[21] For more detailed information on specific requests, see 'A Progress Report on the Interagency Strategy for Accelerating Cooperative Riparian Restoration and Management' (NRST 2002).

increased as a result of initiative outreach and education efforts (Graph 3). Based on survey results, over 85% of respondents felt that their knowledge had increased in the following areas: understanding the relationship between stream attributes and processes; determining a functional rating for riparian areas; and determining limiting factors. Similarly, over 75% of respondents felt that their knowledge had increased in terms of designing monitoring strategies, recognizing the need for journey-level interdisciplinary teams to conduct assessments, and understanding the relationship between riparian function and the attainment of specific values.



The Provision of Quality Services

A third dimension of success identified by interview respondents is the provision of quality services. As previously noted, the second objective of the riparian initiative is to bring diverse groups of people together (through service trips and PFC workshops) to establish a common vocabulary, focused on stream function, for discussing riparian

issues and guiding management actions. In this section the quality of services provided is discussed in terms of diverse participation and participant satisfaction.

According to interview respondents, diverse participation and inclusion of all stakeholders are important for a number of reasons. First, respondents note that diverse participation results in more dynamic interaction among participants. Specifically, individuals with diverse backgrounds and affiliations have different levels and ways of understanding riparian function, as well as different biases. Additionally, individuals with different levels of experience have different frames of reference. Most agency employees have seen many riparian areas and often have a larger frame of reference for comparing the condition of various systems, whereas non-agency participants typically have a very different perspective and usually less experience rating stream systems. As a result, diverse participants not only pose very different questions but they challenge underlying assumptions as well. This creates the type of dialogue needed to truly create a common understanding, and eventually common ground. Another reason why interview respondents identified diverse participation as important was that they felt that it sets the stage for relationship building and collaborative learning. As previously mentioned, one of the important components of both service trips and PFC training sessions is getting diverse groups working together to solve a problem on the ground. When people with diverse backgrounds participate in such an activity, the barriers or stereotypes between groups usually begin to break down and relationships, based on mutual learning and exchange, begin to form.

The second way in which we evaluated ‘quality services’ was through participants’ self-assessment of their satisfaction with the instructors or sponsors and the

design and organization of the services themselves. This dimension of quality was identified a priori because the riparian initiative is a service-oriented government program. Not only did NRST members want to know whether the services provided by themselves and other network members were meeting participant needs, but the fact that this is a Federal program required an assessment of participant satisfaction. Under the current government evaluation structure of performance based measurement, customer satisfaction is one of the outcomes that the NRST was required to report under the Government Performance and Results Act (GPRA).

Service Trips

Regarding service trips, NRST members note that the most successful trips have been those where all stakeholders were present and engaged in the dialogue from the beginning. According to one team member,

> "The ones that have gone really well are the ones where all of the people who needed to be there were there. Even though it may have been a very confrontational and contentious issue that they were fighting about, everybody was there together. Everybody heard the same things, and everybody talked and came to the same conclusions within the group. The ones that haven't gone so well were the ones where certain very important people didn't come. So, they didn't hear all of those same things. Even though they might get a copy of a written report, it's just not the same as having been there and been part of that conversation."

One reason for the increased success on trips where all stakeholders are present is the fact that engaging people up-front in the discussion, as well as in the fact-finding sessions (assessments), builds trust and ownership in the decision-making process and outcomes. Once trust is developed within a group, individuals are more likely to operate

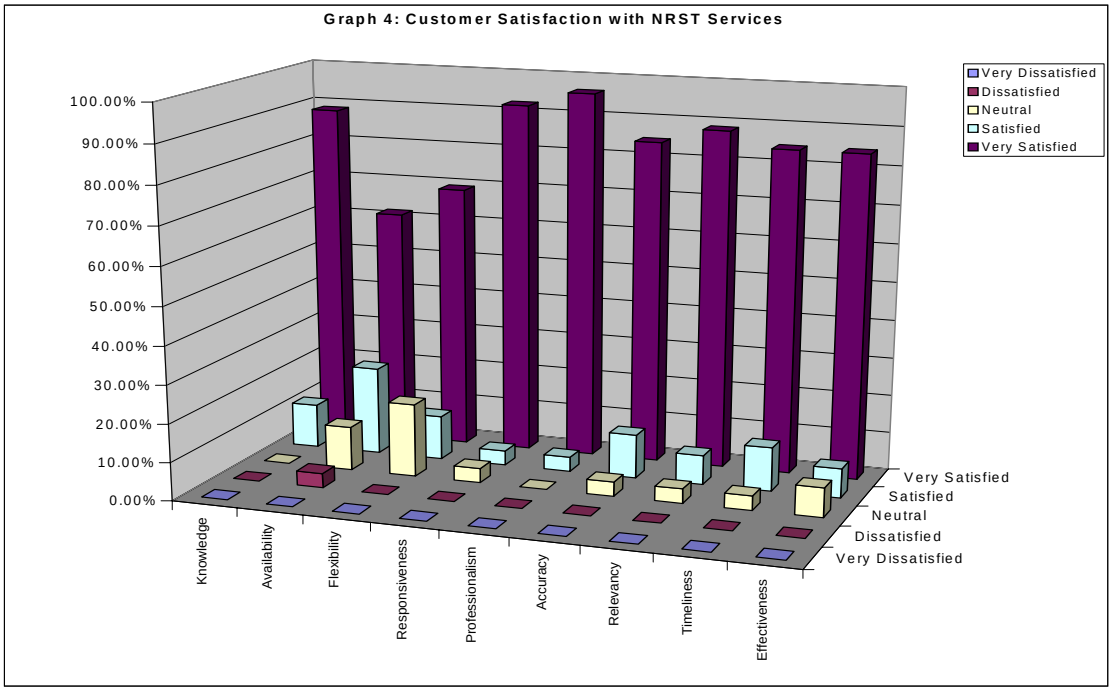
in good faith. Similarly, instilling ownership increases the likelihood that participants will carry out agreed upon activities. In describing the service trip that he felt was most successful, Wayne identified these characteristics:

> "I guess the one [service trip] I feel the best about was the Cumberland trip…The reason why I feel so good about that one isn't so much that they did it [made management changes to restore riparian areas], it was the way they did it. I mean, the comments I got back from some of the people - some of the ranchers in particular. They sent me photos of some of the creeks, and they said, 'you'd really be proud of what we did this year. Boy, the creeks are really looking good. We're still having some problems, but we're working them out.' I mean it was a total acceptance of the thought process, and working with all these landowners."

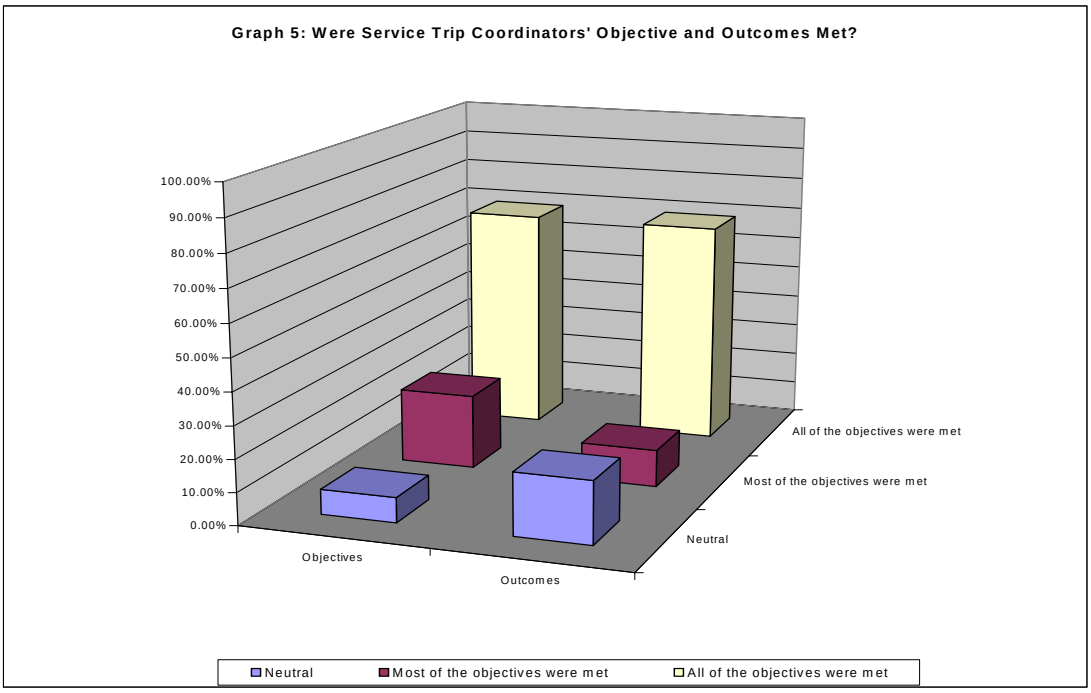
Although a great deal of importance is placed upon engaging diverse groups in both service trips and PFC training sessions, both interview and survey findings demonstrate that network efforts have not always been successful in this area. First, the NRST has participated in service trips where important stakeholders were not present. Even though the team works very hard up-front to ensure diverse participation, it does not always materialize. Based on interview responses, team members are in general agreement that these are often their least successful trips.

In terms of satisfaction, most participants were very satisfied with NRST members and the services and products provided. According to the results of the service trip survey, most respondents were very satisfied with the knowledge (0 = 1.88), availability (0 = 1.42), flexibility (0 = 1.50), responsiveness (0 = 1.88) and professionalism (0 = 1.96) exhibited by NRST members (Graph 4).[22]

[22] Based on a five-point scale (-2=very dissatisfied; -1=dissatisifed; 0=neural; 1=satisfied; 2=very satisfied).



Additionally, the majority of respondents were also very satisfied with the accuracy (0 = 1.81), relevancy (0 = 1.85), timeliness (0 = 1.81) and effectiveness (0 = 1.77) of the products and services delivered. There was a drop in satisfaction ratings, however, regarding availability and flexibility. This provides additional evidence for the previous claim that the NRST has a 'hectic schedule.' With regard to whether the NRST met service trip coordinators' objectives and outcomes (Graph 5), 69% of respondents stated that all of their objectives had been met. An additional 23% felt that most of their objectives had been met. Similarly, 69% of respondents stated that all of their expected outcomes were received.



PFC Workshops

Regarding PFC training sessions, network members note that many cadres are struggling to increase the diversity of their audience. Even cadres, such as Colorado, who engage in extended and deliberate outreach efforts - often partnering with organizations such as county extension, NRCS, the Cattleman's association, county administrators and commissioners - seldom recruit large numbers of landowners or members of the general public. Although the Colorado cadre is noted for diverse participation within their training sessions, in actuality, the majority of participants represent government agencies – albeit different government agencies. In other words, the Colorado cadre has been successful in soliciting participation outside the normal

channels (e.g., BLM, USFS and NRCS), but they have had considerably less success recruiting non-agency participants.

The notion that diverse audience participation is lacking is supported by the survey results as well, which indicate that PFC training session participants are not diverse in terms of affiliation/employment. Most participants in PFC training sessions were employed (98%), and 87% worked for government agencies. Seventy nine percent (79%) were federal employees, 18% state and 3% local. The participants' socioeconomic characteristics are presented below (Table 4). It is important to recognize, however, that the socioeconomic characteristics presented represent those of primarily federal employees rather than the general public. Approximately seventy one percent (71%) of the respondents were male. The age of respondents ranged from 25 to 76 years, with an average age of 45 years. Forty six percent of respondents were college graduates, 21% had attended some graduate school, and 30% held masters, doctoral, or professional degrees. Finally, they reported an average household income between 50 and 60 thousand dollars.

<u>Table 4:</u> PFC Training Participant Survey respondents' characteristics (socio-economic).

Characteristic	***Number of Respondents***	***Percent of Respondents***
Gender		
Male	100	70.9%
Female	41	29.1%
Age (0 = 45 years)		
20-30	7	4.7%
30-40	26	17.4%
40-50	65	43.4%
50-60	37	24.7%
60-70	1	0.7%
70-80	2	1.4%
Education		
Eighth grade or less	0	0%
Some high school	0	0%
High school graduate, GED	2	1.4%
Trade school, some college	3	2.1%
College graduate	65	45.8%
Some graduate school	30	21.1%
Masters, PhD, professional degree	42	29.6%
Income (0 = $50-60,000)		
Less than $10,000	0	0%
$10,000-$19,999	0	0%
$20,000-$29,999	6	5.1%
$30,000-$39,999	16	13.7%
$40,000-$49,999	33	28.2%
$50,000-$59,999	25	21.4%
$60,000-$69,999	14	12.0%
$70,000-$79,999	12	10.3%
$80,000-$89,999	0	0%
Over $90,000	10	8.5%

Survey results also indicate that PFC workshop participants are not very diverse in terms of their interest or the level of importance placed on riparian issues. As seen in the chart below (Table 5), participants varied in their interests. However, the top six

(over 50%) were the following: water quality (69%), vegetation (60%), hydrology (58%), ecology (55%), wildlife (54%), and range management (53%). Regarding reasons for participating in PFC training sessions, the two top responses were 'to learn more about riparian areas and their function (43%),' and 'to better understand the tools that government agencies use to assess riparian areas (25%).' Finally, 89% of respondents felt that riparian management was important (very/extremely) (0 = 4.34), and 78% felt that it was important (very/extremely) that all of the interested parties are involved in the decision making process regarding the restoration and management of these areas (0 = 4.00).[23]

<u>Table 5:</u> PFC Training Participants' Self-Identification of Primary Concerns and/or Interests Related to Riparian-Wetland Areas

Concerns or Interests	***Number of Respondents***	***Percent of Respondents***
Water quality	100	69%
Vegetation	87	60%
Hydrology	84	58%
Ecology	80	55%
Wildlife	78	54%
Range management	77	53%
Fish biology	70	48%
Agriculture	66	46%
Cooperative watershed management	65	45%
Biology	64	44%
Soil	64	44%

[23] Based on a five-point scale (1=not at all important; 2=slightly important; 3=somewhat important; 4=very important; 5=extremely important).

Concerns or Interests	*Number of Respondents*	*Percent of Respondents*
Protection	48	32%
Recreation	44	29.3%
Forestry	36	24%
Fires and fuels	28	18.7%
Community development	23	15.3%
Engineering	21	14%
Geology	16	10.7%
Wilderness	15	10%
Other	14	9.3%
Realty	4	2.7%

Regarding participant satisfaction with PFC workshops, most survey respondents were satisfied with the attributes of the team or cadre (Table 6). Specifically, at least 45% of respondents were 'extremely satisfied' with the following attributes of the cadre/team: professionalism, knowledge, and willingness to participate in a two-way exchange of ideas.[24] The one attribute with which respondents were slightly less satisfied was the cadre/team's availability. Second, most respondents 'strongly agreed' that the cadre/team is committed to providing quality conservation education (62%), as well as working cooperatively (55%).[25] However, only 34% 'strongly agreed' that outreach efforts were effective, which provides some insight into why the diversity of audience participants has been low.

[24] Based on a five-point scale (1=extremely dissatisfied; 2=somewhat dissatisfied; 3=slightly satisfied; 4=somehwat satisfied; 5=extremely satisfied).
[25] Based on a seven-point scale (1=strongly disagree; 2=somewhat disagree; 3=slightly disagree; 4=slightly agree; 5=somewhat agree; 6=strongly agree; 7= don't know).

Table 6: **PFC Training Participant Survey respondents' satisfaction with workshop instructors or sponsors**

Instructor-Sponsor Attribute	*Number of Respondents*	*Percent of Respondents*	*Mean*[26]
Professionalism			**5.41**
Extremely satisfied	78	57%	
Somewhat satisfied	40	29%	
Knowledge			**5.28**
Extremely satisfied	67	48%	
Somewhat satisfied	51	37%	
Willingness to participate in dialogue			**5.27**
Extremely satisfied	71	53%	
Somewhat satisfied	43	32%	
Availability			**5.15**
Extremely satisfied	54	39%	
Somewhat satisfied	57	42%	

[26] Don't know responses (7) were counted as missing values for calculating means for seven-point response scales.

Instructor-Sponsor Attribute	*Number of Respondents*	*Percent of Respondents*	*Mean*[26]
Committed to conservation education			**5.55**
Strongly agree	88	62%	
Somewhat agree	35	25%	
Committed to working cooperatively			**5.45**
Strongly agree	77	55%	
Somewhat agree	39	28%	
Effective outreach efforts			**5.13**
Strongly agree	47	34%	
Somewhat agree	43	31%	

Participant satisfaction with the organization of PFC training session is presented in table seven. Over 80% of respondents agreed (somewhat + strongly) with the following statements regarding training session attributes: the event was structured in a way that enabled participation (87%); the cadre/team targeted information to its audience (82%); the cadre/team provided technically accurate information (82%); the PFC method was understandable (81%); and my input and interests were valued and respected (80%).[27] On the other hand, while a majority agreed (somewhat + strongly), there was a drop in the percentage agreeing with the following statements: PFC is a good tool for developing a common language between people with diverse interests (70%); PFC is a good tool for assessing riparian areas (65%); and the training session met my needs

(61%);. Regarding participant satisfaction with the PFC tool, most interview respondents also recognized that there were a number of existing criticisms of PFC as an assessment method. However, whereas there was a slight dip in the percentage of survey respondents who agreed that PFC was a good tool for developing a common vocabulary and understanding among diverse interests, network members generally agreed that the strength of PFC was in its use as a communication tool.

Table 7: PFC Training Participant Survey respondents' satisfaction with the training session.

Training Session Attribute	*Number of Respondents*	*Percent of Respondents*	*Mean*
Event structured in a way that allowed me to participate			**5.32**
Strongly agree	77	53%	
Somewhat agree	49	34%	
The cadre/team does a good job of targeting information to its audience			**5.11**
Strongly agree	52	37%	
Somewhat agree	63	45%	
The cadre/team provides technically accurate information			**5.17**
Strongly agree	63	46%	
Somewhat agree	50	36%	
The PFC method was understandable			**5.09**
Strongly agree	55	38%	
Somewhat agree	62	43%	

[27] Based on a six-point scale (1=strongly disagree; 2=somewhat disagree; 3=slightly disagree; 4=slightly agree; 5=somewhat agree; 6=strongly agree).

Training Session Attribute	*Number of Respondents*	*Percent of Respondents*	*Mean*
My input and interests were valued and respected			**5.13**
Strongly agree	59	42%	
Somewhat agree	54	38%	
PFC is a good tool for developing a common language between people with diverse interests			**4.86**
Strongly agree	46	32%	
Somewhat agree	56	38%	
PFC is a good tool for assessing riparian areas			**4.64**
Strongly agree	39	27%	
Somewhat agree	55	38%	
The PFC session met my needs			**4.75**
Strongly agree	41	28%	
Somewhat agree	57	39%	

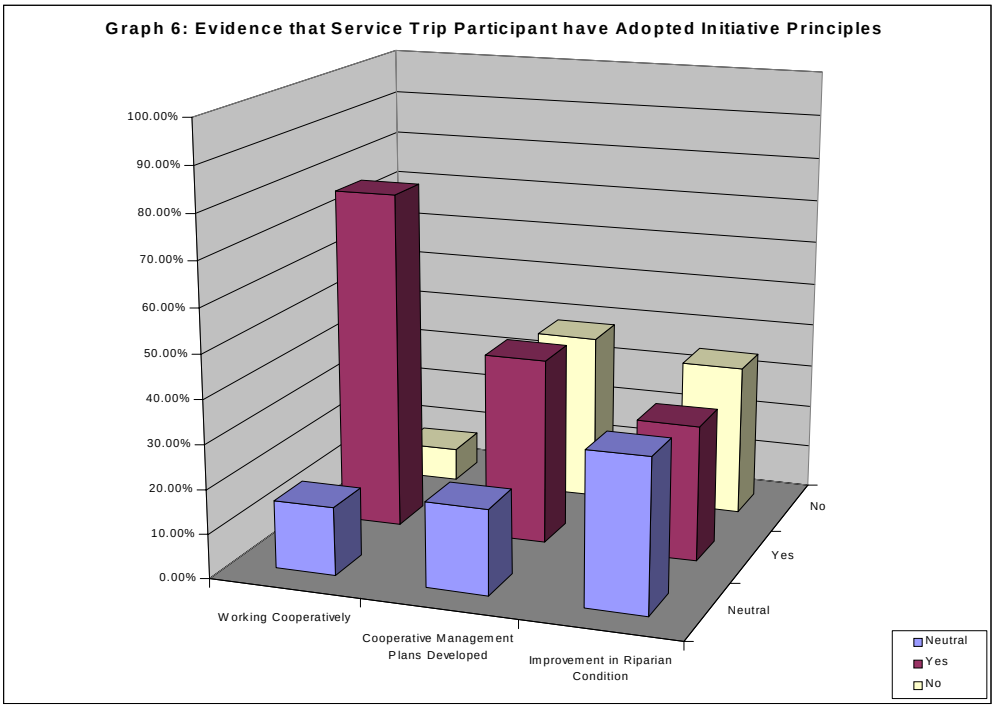
Evidence that Participants Have Adopted Initiative Principles

The final measure of success identified by interview respondents is evidence that participants have adopted initiative principles. This dimension of success relates to the third objective of the riparian initiative, which is to provide a basis (or set of principles) for facilitating cooperation, or coordination of restoration and management activities, across jurisdictional boundaries in order to improve riparian health. The general sentiment among interview respondents is that important examples of success in terms of increased cooperation and improved riparian health can be documented on a case-by-case basis. However, interview respondents noted that there is less evidence that cooperation and riparian health have been improved on a large scale as a result of the riparian

initiative. This notion is further supported by both service trip and PFC workshop survey results.

Service Trips

Regarding the service trips, 77% of survey respondents noted that the NRST's assistance has enabled people to work cooperatively to improve riparian condition (Graph 6). Additionally, a number of respondents voluntarily provided written comments to substantiate their claims, including: "helps generate common ground;" "helped put all interests on the same page;" "the training opens lines of communication among individuals;" and "the primary advantage gained was improving communication with forest officials."



Additionally, 42% of survey respondents indicated that cooperative management plans had been designed or implemented (Graph 6). A number of respondents highlighted specific examples, including: "the North Fork River Improvement Project;" "the Conservation Strategy for the Golden Creek Trout;" "the Cowhead Lake conservation agreement and strategy has been signed by all parties - implementation is currently occurring;" and "the Cumberland Steering Committee and the BLM are in the final stages of the AMP process for one of the biggest allotments in America (400,000 acres and 8,000 cows)." In contrast, 39% of survey respondents noted that no cooperative management plans have been designed to date.

Concerning improved riparian health, 31% of service trip survey respondents indicated that the initiative has made a difference in the condition of riparian resources (Graph 6). Some survey respondents provided additional information, such as: "I have seen positive applications of the training to improve riparian areas;" and "a large interagency group in Kansas is using PFC as a way to work cooperatively to improve riparian areas within the state." On the other hand, 35% of survey respondents stated that they were unsure, and 35% stated that no change had occurred. A number of respondents provided additional comments stating that it was simply "too early to tell."

When reviewing the results presented in graph six, it is obvious that there is a decline in 'yes' responses as one moves across the graph. There are a number of reasons for this decline. First, the three categories presented represent stages or phases of progress where cooperation occurs first, followed by planning, and then on-the-ground improvements. As a result, there is an inherent time lag as groups move through these phases. For instance, a cooperative management plan could have been developed and

implemented but on-the-ground changes in riparian health may not be observable for a number of years. Another explanation for the decline is linked to a group's ability to solicit the up-front participation of all necessary stakeholders. Although cooperation may be improved within a group, it will not lead to the creation of cross-jurisdictional plans or management changes unless all necessary stakeholders are present. As a number of survey and interview respondents noted, this is not always the case. Finally, the current structure of service trips is such that they typically function as a one-time intervention. This may not be enough to help groups move through the different tasks needed to ensure change on the ground. Rather, groups may need additional help working through conflict, learning specific management and/or monitoring techniques, or acquiring the resources or support (both political and material, including people to do work, and finances to assist landowners with initial investments) to implement changes on the ground.

PFC Workshops

In contrast to service trips, the results of the PFC workshop survey indicate that only 23% of respondents agree (somewhat + strongly) that these workshops have increased cooperation within their area (μ=3.61).[28] According to interview respondents, the biggest success of the PFC workshops has been in terms of increasing communication and cooperation internally within agencies, particularly among interdisciplinary planning teams. However, most interview respondents feel the initiative has been less successful in

[28] Based on a six-point scale (1=strongly disagree; 2=somewhat disagree; 3=slightly disagree; 4=slightly agree; 5=somewhat agree; 6=strongly agree).

terms of fostering interagency cooperation or cooperation between agency and non-agency organizations, interest groups, interested publics and/or landowners.

Interview respondents note that although communication and cooperation seem greatly improved during the PFC workshops themselves, there is less evidence that this situation remains post session. Additionally, they note that it is likely that some cooperative projects (case-by-case basis) have been initiated as a result of the PFC workshops. However, most feel that this is the exception rather than the rule. For instance, one Colorado cadre member states,

> "The initiative has been effective in getting the word out, building a common vocabulary and increasing awareness, but I don't think it's led to as much tangible on-the-ground improvement as initially envisioned…The knowledge, the appreciation, the vocabulary, the understanding is out there. Whether it's being taken to that next level, I think in a lot of cases it's not. I'm just speaking of Colorado, but…if it were ever going to self-combust and take-off anywhere Colorado would be a likely place because of the widespread nature of our training (high number of training sessions and drawing non-traditional participants). And I don't think it's really happening."

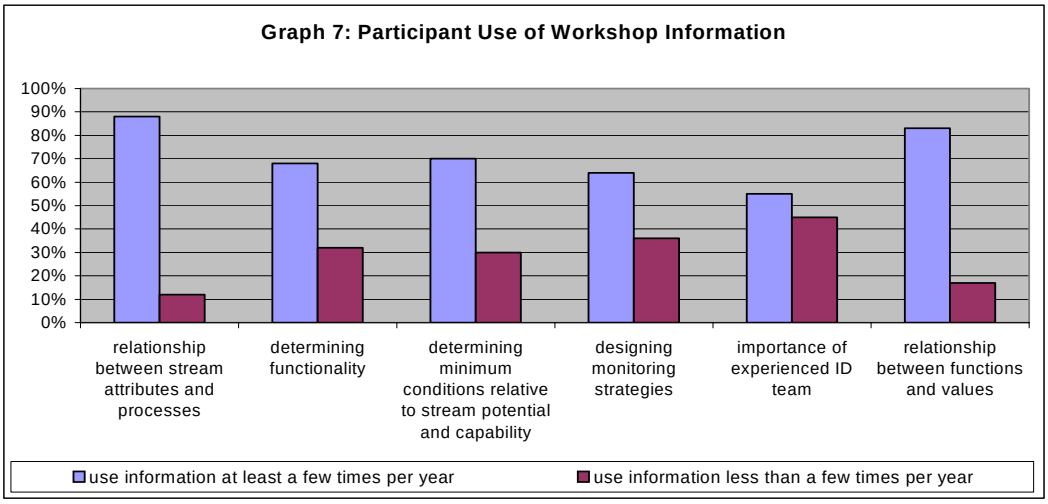
This respondent also commented on the fact that the Colorado cadre makes it a point to give out their contact information and offer their services to individuals and groups developing projects, but "nobody ever takes the list and seems to call."

Similarly, one Utah cadre member argues that "rather than fostering conversation, the assessments are becoming points in lawsuits against the agencies. I can safely say that 90% of our grazing permits have been appealed by a particular organization." This respondent notes that, occasionally, the lawsuits are coming from the permittees themselves. However, most often they are coming from the environmental community,

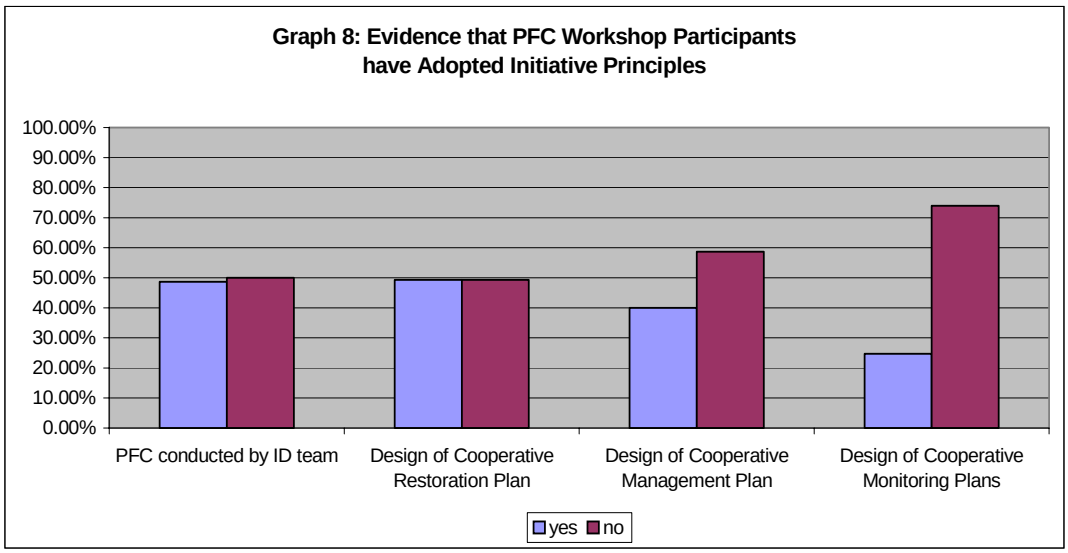
who conduct their own PFC assessments and then use them against the BLM. This individual considers this a problem because,

> "part of the deal is we're supposed to conduct these assessments together and draw conclusions as a group. We make the decisions on the ground, we don't come back in here and make this stuff up after. We make the conclusions as a group, and they refuse to play. So, that's not cooperative…At the Salt Lake field office we invited our interested publics to participate in these range land assessments and riparian functionality assessments, and they refused…Part of our responsibility is to work with and communicate with all interested publics, which include the permittee and the environmental communities – outdoor recreation groups, OHV groups, wilderness groups, ecology groups. The permittees are coming out, but we're getting no participation from the environmental groups."

Another indicator that we used to ascertain whether workshop participants had adopted initiative principles was the measurement of how often participants have applied to knowledge gained as part of these workshops. As previously noted, between 75-85% of survey respondents indicated that their knowledge had increased in a variety of dimensions (see Graph 3). In addition to simply gaining knowledge, most PFC workshop participants noted that they used this information at least a few times per year, if not monthly, weekly or daily (Graph 7).



Finally, 49% of PFC training sessions respondents have participated in PFC assessments conducted by a journey-level, interdisciplinary team (Graph 8). Fifty percent have participated in the design and/or implementation of cooperative restoration plans, while 40% have participated in the design and/or implementation of cooperative management plans. Finally, 25% have participated in the design and/or implementation of cooperative monitoring plans. The fact that so few workshop participants have engaged in the development of monitoring plans can be linked to the fact that monitoring approaches are not typically covered in the basic PFC session.



The results obtained from this portion of the PFC workshop survey are problematic for a number of reasons. First, as previously noted, only 23% of survey respondents agreed (somewhat + strongly) that the PFC workshops had increased cooperation within their area (see page 144). Furthermore, only 13% of PFC workshop participants were identified as private individuals as opposed to government employees

(see page 134). Thus, it is unlikely that the 40-50% of respondents who indicated that they had participated in the design and/or implementation of cooperative restoration and management plans did so as a result of their participation in the PFC workshop (Graph 8). Rather, it seems more likely that these individuals are responding to this question in this manner because they have indeed participated in cooperative plans as agency employees; however, it is less likely that these efforts were a direct result of the PFC workshops.

Discussion

As previously noted, the riparian initiative has a dual mandate. On one hand, the initiative is a government organization that is mandated to provide requested services to 'clients.' Beyond that, though, initiative implementers are expected to engage in activities that accelerate cooperative riparian restoration and management across jurisdictional boundaries. The intention of this chapter was to ascertain whether initiative implementers have been able to successfully meet both of these mandates. Study findings indicate that the NRST, who engage primarily in service trips, has been more successful in accomplishing this goal than have state level cadres, who rely primarily on PFC workshops.

First, the NRST is considered to be a well-functioning team. According to interview respondents, this is a pre-requisite to achieving success in other dimensions. State level cadres, on the other hand, are functioning at different levels of 'operational effectiveness' in terms of their ability to interact as a team and to sponsor PFC

workshops. Regarding differences in cadre effectiveness, it is important to note that PFC workshop survey respondents were primarily engaged in PFC workshops sponsored by the Oregon, Idaho and Colorado cadres. These cadres are considered to be some of the oldest and more successful cadres within the network. In turn, the survey results reflect the opinions of participants engaged in workshops sponsored by 'strong' cadres. This raises an important question - what have been the outcomes of workshops sponsored by 'weaker' cadres?

Regarding participant satisfaction, both service trip and PFC workshop participants were very satisfied with the instructors and the services provided. Service trip survey respondents were slightly less likely to be satisfied with the availability and flexibility of the NRST. This is because the team is in a situation where the demand for their services has outstripped their ability to provide them.

Regarding PFC workshops, participants were less likely to be satisfied with the effectiveness of instructors' outreach efforts. This finding was further elaborated upon by interview respondents who noted a lack of deliberate and concerted outreach efforts among state cadres (i.e., there is a propensity to work with the willing). A more detailed discussion of this issue, which has led to a notable lack of diverse workshop participants, is presented in chapter six.

PFC workshop participants were also slightly less likely to be satisfied with PFC as an assessment method and a tool for developing a common vocabulary and understanding among diverse interests. This finding was further elaborated upon by one interview respondent, in particular, who argued that PFC cannot be used to solve all riparian related conflicts because it is geared toward the resolution of information based

conflicts (conflicts where people interpret information differently, or there is not information and people are making assumptions about it). In these types of conflicts, he argues, information is the lynch-pin for dealing with the conflict and PFC works well because it gets people to see things together and have transparent discussion about the issues so people can begin to understand why they see things differently. However, he argues that PFC doesn't work too well when it comes to resolving interest or value based conflicts because the conflict is at a different level – and won't be resolved by simply providing information. The inherent problems with relying solely upon information campaigns to solve resource-related conflicts and motivate sustainable behaviors are further discussed below.

Although both service trip and PFC workshop survey results indicated generally high levels of satisfaction across the board, there was less evidence of correspondingly high levels of success in terms of improvements in cooperation or riparian health. That is not to say that notable examples of success do not exist. They do exist on a case-by-case basis and have been primarily linked to service trips rather than PFC workshops. In other words, service trip participants have demonstrated evidence that they have adopted initiative principles in terms of improving cooperation and riparian health. However, service trips have not demonstrated across the board success in these areas. On the contrary, success has been attributed to the up-front participation of necessary stakeholders. Additionally, success has been linked to the nature of the group – particularly the presence of individuals who are not only willing, but also have the resources to participate in collaborative efforts and implement management changes (this is discussed further in subsequent chapters).

In discussing 'success,' most interview respondents did not view the riparian initiative as a failure even though there is a lack of evidence indicating large-scale improvements. On the contrary, most argue that case-by-case examples should be viewed as an important indicator of the potential for success at a larger scale. Furthermore, initiative respondents note that the overarching goal of the riparian initiative, while commendable, is difficult to attain (especially in five years). Specifically, one interview respondent notes:

> "I think you kind of have to back off the huge picture and say, 'Man, look what we've got.' We've got a Texas group. This place is being restored. This place has come back. We've changed management over there, and it is good. You know, I think its important to remember those case-by-case successes...I mean, you're never going to be out of work – there will always be a riparian area that sucks."

Another respondent states,

> "We have seen improved streams. Can I tell you that 80% of the streams in the west have been restored? No. I'll take 8%. Anything is a step in the right direction."

Although it is important to recognize the small successes, the question remains – why has there not been as much success as envisioned? This question will be further explored in chapter six, but I provide a brief response below. In short, the reason why there has been less success than envisioned is related to the a point raised earlier – the fact that information alone cannot solve all riparian related conflicts, nor can it motivate all necessary stakeholders to participate in collaborative activities or implement management changes.

The main focus of both service trips and PFC workshops (although PFC workshops more-so) is providing assistance with technical or information based conflicts.

However, less than 8% of PFC workshop participants identified ‘technical issues’ as an extremely serious barrier to cooperative riparian restoration and management (Graph 9). When asked to rate a number of barriers, over 20% of PFC workshop participants identified the following barriers as ‘extremely serious:’ lack of communication and/or trust (34%); resource constraints (33%); conflicting objectives (31%); politics (29%); fundamental differences between stakeholders (27%); and difficulty securing involvement of all stakeholders (21%).

Similarly, service trip participants identified lack of up-front participation of necessary stakeholders, lack of institutional support (political and material), and slow rates of change on the ground as the main barriers to achieving and documenting success. Consider, for example, the following comments written by service trip survey respondents. “We wish we could have had better local participation.” “One of the objectives was to have meaningful discussions with the parties that disagreed with the district’s original riparian assessment. For reasons unknown, none of these people showed up for the re-assessment.” “Agencies are reluctant to implement processes guided by NRST procedures.” “We have been focused on other priorities to date.” “The National Marine Fisheries Service [with their expensive monitoring requirements] is lording over the process and the FS has no escape except to eliminate grazing in order to reduce that cost.” “To me, the members of the NRST have set a new standard in natural resource professionalism, as well as a model for cooperation...I get the impression, though, that the level of experience demonstrated by the members of the service team is head-and-shoulders above many of the other natural resource professionals in their agencies.” “Progress is slow.” “It is too early to tell [regarding on-the-ground changes].

Assessment and recommendations are one thing, but the actual implementation of grazing plans is another."

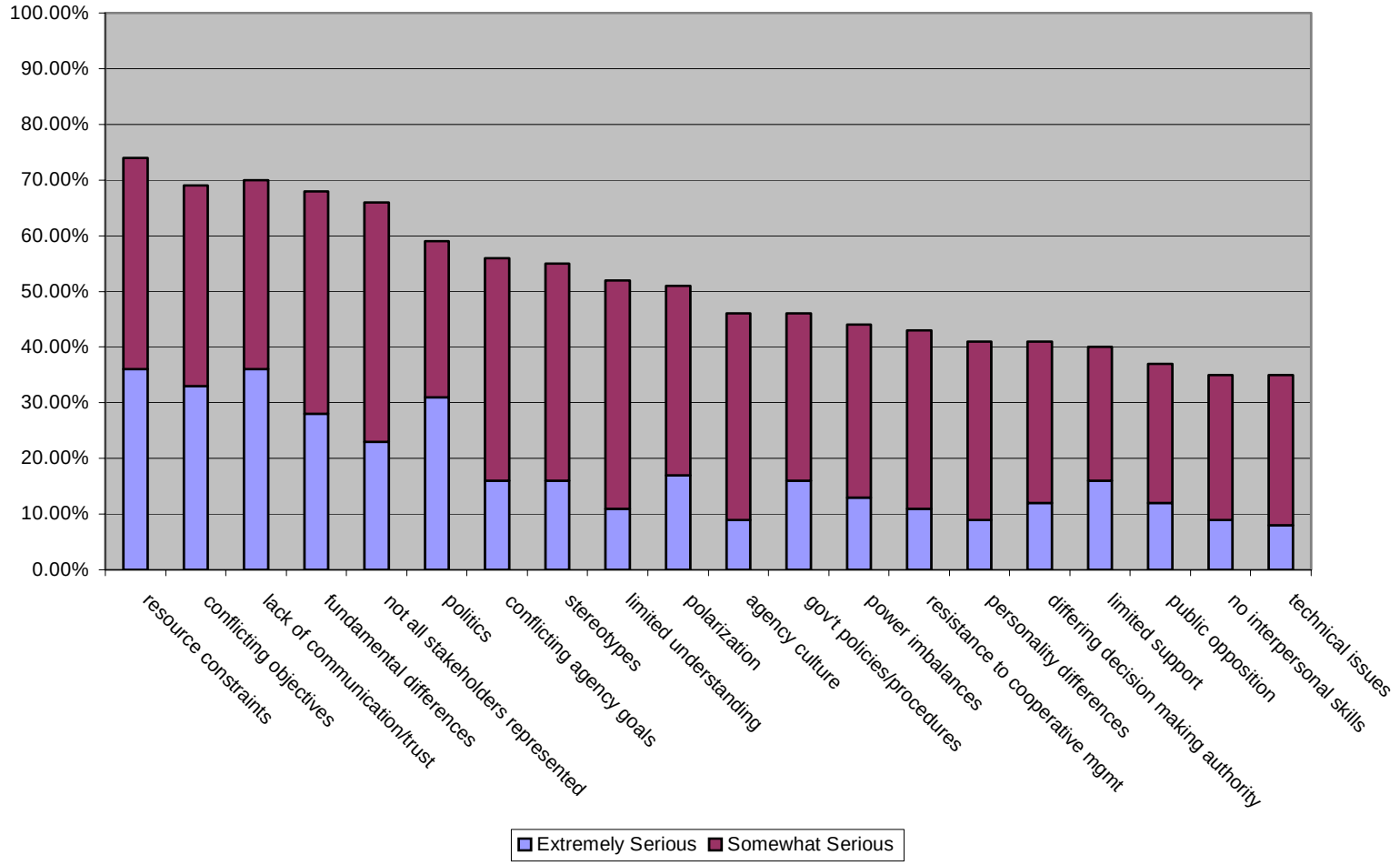
A review of these barriers indicates that an information-based campaign, focused on the technical aspects of riparian management, is not enough to meet the riparian initiative's second mandate of accelerating cooperative riparian restoration and management. The assertion that information alone cannot motivate individuals to participate in collaborative efforts or to change their behaviors is supported by Mackenzie-Mohr and Smith (1999). They note that although information can change behavior, it alone is not enough to influence behavior in terms of engagement in sustainable activities. Mackenzie-Mohr and Smith (1999) argue that the reason for this is that information campaigns typically work to alter attitudes by enhancing knowledge or demonstrating the financial advantages of a sustainable activity. However, unsupportive attitudes due to a lack of knowledge or an inability to recognize financial benefits are only a few of the barriers that can deter individuals from engaging in a sustainable behavior (Mackenzie-Mohr and Smith 1999).

Mackenzie-Mohr and Smith (1999:13) argue that a variety of barriers exist and are tied to a "rich mixture of cultural practices, social interactions, and human feelings that influence the behavior of individuals, social groups, and interactions." In addition to the ideal factors that shape environmental conflicts and individual behaviors, a political ecology perspective also calls attention to the material constraints that preclude individuals from participating in collaborative efforts and implementing management changes. From a landowner perspective, one such material constrain is a lack of time to participate in collaborative efforts – given the existing responsibilities associated with

ranch management. Landowners also face material constraints in terms of the up-front costs that often accompany management changes such as fencing or changing grazing rotations. Agency employees also face material constraints. For instance, although collaboration may be supported politically within land management agencies, it is often difficult to secure the resources needed to engage in these activities and to report accomplishments associated with these types of efforts. Furthermore, agency employees are often faced with changing agency priorities that can limit the amount of resources (e.g., financial, staff) available to address riparian issues.

When designing environmental programs aimed at influencing individual behaviors and activities, it is important to understand and design strategies to address the perceived and real barriers (costs) and benefits that underlie the behavioral choices that individuals make. In addition to focusing on the ideal and material factors that exist at the individual scale, it is also important to consider the structural context within which individuals operate because this context provides certain incentives and disincentives that shape individual perceptions and assessments of benefits and barriers. In the following chapter, I look at this issue in-depth. Specifically, I outline a number of individual and institutional level factors identified by interview respondents as facilitating and constraining the success of the riparian initiative. I have chosen to focus on these two scales because the riparian initiative is situated within an agency context and caters primarily to diverse groups of agency employees.

Graph 9: Barriers to Cooperative Riparian Restoration and Management as Identified by PFC Workshops Survey Respondents



Chapter Six: Factors that Facilitate and Constrain Success

Introduction

The following section outlines a number of factors, which my analysis of the interviews suggest are important in determining the success the riparian initiative. My analysis of individual interviews identified a variety of factors, and nomothetic (across interview) analysis reveals a number of commonalities. First, respondents often identified similar factors that limit or enhance the success of the riparian initiative. Second, they discussed factors that exist at multiple scales such as the individual, the community, the institutional, and the larger political economy. Specifically, while respondents noted the importance of an individual to the success of the initiative, at the same time, they recognized that existing and historical social structures and institutional arrangements have a significant influence over an individual's behaviors and activities.

Within this chapter, I present the institutional and individual level factors that facilitate and constrain the success of the riparian initiative as identified by respondents. Given the nature of the riparian initiative (i.e., agency led, implementers and clients primarily federal agency employees), the decision to focus on factors at these two scales is appropriate. This decision is further substantiated by the fact that respondents themselves typically focused their discussions in terms of individual and institutional level factors. Following my description of factors at both scales, I present a discussion of the interaction between these scales with regard to the riparian initiative.

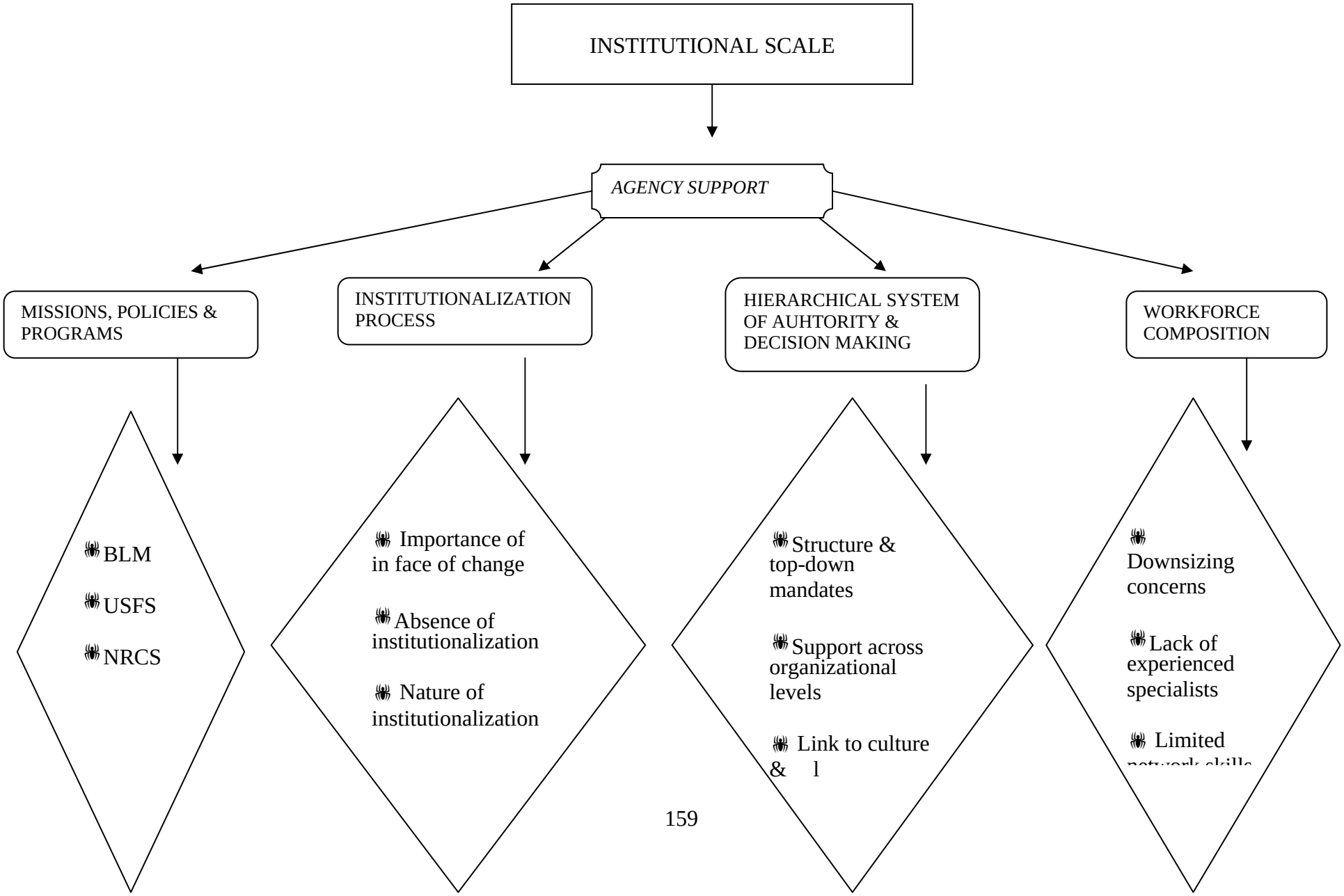
Institutional Scale

Respondents highlighted a number of institutional level factors that they viewed as impacting the success of the riparian initiative. In the following section, I discuss the fact that there are currently differing degrees of support including political support for and the allocation of financial resources for both the PFC assessment method and the riparian initiative across the three partnering agencies (BLM, USFS, and NRCS). I also outline the consequences of these differences in levels of agency support. The remainder of this section focuses on four major institutional level factors that contribute to differing degrees of agency support. As seen in Figure 3, the factors that influence agency support include: agency missions, policies and programs; the institutionalization process; hierarchical systems of authority and decision making; and workforce composition.

Agency Support

According to respondents, who are individuals located within various components of the riparian coordination network and are responsible for implementing the initiative, agency support, particularly across the three sponsoring agencies, for both the PFC assessment method and the riparian initiative is an important factor in determining success. However, the level of support varies considerably across the three partnering agencies. In discussing agency support, respondents note that the BLM has provided the most support [T8-1, T8-2]. According to respondents, the Forest Service and the NRCS, on the other hand, have demonstrated respectively lower levels of support for both PFC and the riparian initiative [T8-1, T8-2, T8-3, T8-4].

FIGURE 3: Institutional Factors



As indicated by interview excerpts in Table #8, the significance of ‘agency support’ as a facilitating and constraining factor was documented through both positive (presence of support) and negative (absence of support) examples. Specifically, respondents noted success as a consequence of the presence of support within the BLM, while failure was attributed to the absence of support within the NRCS and USFS. Specifically, respondents noted that because of high levels of support within the Bureau, BLM employees have been in a position to lead efforts geared toward implementing the riparian initiative. Not only have BLM employees been the foundation of the riparian coordination network [T8-5], but they have also held key positions on successful state cadres and been noticeably absent from struggling ones [T8-6]. At the same time, Forest Service and NRCS participation on state cadres and within the extended riparian coordination network has been limited [T8-5].

Furthermore, respondents note that there has been limited involvement, particularly in PFC workshops and less-so in service trips, by the private sector. This is seen as a serious concern given the collaborative mission of the initiative [T8-7, T8-8, T8-9, T8-10]. Many respondents believed that lack of landowner participation in the riparian initiative is linked, in part, to the absence of NRCS support for the riparian initiative. According to respondents, landowners are often unwilling to participate in government sponsored activities such as the riparian initiative because of the existing high levels of distrust between the federal government and local citizens, which are particularly evident within the west [T8-11, T8-12, T8-13]. Specifically, one cadre member notes, “I’d really like to see more landowner involvement, but usually when an

agency sponsors an education thing it's a big leap for a landowner to feel comfortable." Although this distrust is evident to some degree among all federal agencies, respondents note that it is most prevalent between landowners and federal land management agencies (BLM and USFS). They believe that this is a result of the fact that, unlike the NRCS, the BLM and USFS often operate in a regulatory capacity [T8-14, T8-15, T8-16] and have traditionally been generally unwilling to work with landowners (as opposed to controlling the situation) [T8-13, T8-17, T8-18].

With respect to gaining agency support for new and innovative programs, respondents noted that significant institutional barriers include the difficulty of overcoming values held by those at a higher level within the hierarchy [T9-1]. Respondents also noted difficulty in overcoming the current nature of agency culture, which inhibits both the risk taking necessary to establish innovative programs [T9-2] and the cooperation and integration needed to address evolving problems [T9-3]. Specific institutional structures identified as important factors affecting agency values and cultures, and more broadly speaking agency support, include the following: missions, policies and programs; the institutionalization process; hierarchical systems of authority and decision-making; and workforce composition (Figure 3). The remainder of this section provides a detailed discussion of each of these individual factors.

Missions, Policies and Programs

Respondents note that one reason for varying support of PFC and the riparian initiative across the three partnering agencies is the fact that each agency has different

missions, policies and programs. Since each bureaucracy is created to serve a specific social function, the different missions, policies and programs governing various federal agencies impact levels of support that an agency will give to certain initiatives and tools. Respondents attribute high levels of BLM support to the fact that the goals and objectives of the riparian initiative fall within the Bureau's mission, and PFC provides a means for meeting their policy and program objectives. Since PFC was developed by the BLM, respondents note that Bureau employees not only have "a fair amount of ownership in the process" [T8-1, T8-4], they also have a tool that is designed to address specific riparian issues on BLM lands [T10-1, T10-2].

Respondents note that the Forest Service, on the other hand, has historically shown less support for PFC and the riparian initiative because of its unique mission, policies and programs. Unlike the other agencies, the USFS was created to function in part as a research organization. As a result, research specialists comprise a relatively large portion of the agency's workforce and have developed a variety of assessment, planning and monitoring protocols of their own [T10-3]. Due to the historical positioning of the Forest Service as *the* research organization, USFS employees are generally less likely to accept methods created by the BLM[29] [T10-4, T10-5, T10-6, T10-7]. Regarding the acceptance of PFC specifically, employees argue that Forest Service methods provide more detailed and quantitative information, and are more efficient [T10-8, T10-9]. Respondents also argue that PFC does not "work well…in forested communities" [T10-

[29] Again, it is important to remember that PFC was created by a diverse group of agency employees. However, it is well known that 'naming is claiming' and only the BLM's name was attached to the final product. The interview text highlights the fact that most agency employees do not see it as an interagency tool, they see it as a BLM tool.

10], nor does it sufficiently address the range of issues facing Forest Service managers, including: wide ranging endangered species [T10-11], fish and wildlife habitat [T10-12, T10-13], recreation [T10-14], and fires [T10-15].

Finally, respondents note that the NRCS has historically been the least supportive of PFC and the riparian initiative because their mission, policies and programs are dramatically different from their partners'. Unlike the BLM or the USFS, the NRCS was formed to provide technical assistance to private landowners rather than stipulate the manner in which lands will be managed [T10-16, T10-17, T10-18]. Since the NRCS is only able to exist as long as landowners continue to request their services, they are in a position of marketing their service to landowners [T10-19]. Given their role as 'consultants,' the NRCS is reluctant to align strongly with any one particular agency, or "advocate a particular kind of technique," because they don't want to be perceived as a threat to the landowner in any way [T10-19, T10-20, T10-21]. In this situation, the NRCS' decision to support or align with certain programs, initiatives or other agencies is influenced by the material context within which the agency is placed and the fact that their employees' job security is directly linked to the NRCS' ability to be perceived as an advocate for the landowner.

Respondents also attribute the absence of NRCS support to the fact that PFC does not adequately meet their program goals [T10-22]. Specifically, employees note that NRCS clients require a tool that enables them to not only inventory their riparian areas but to also provide "scientifically quantifiable" information. In addition, there is a perception that PFC focuses too much on riparian areas alone and that it ignores uplands

and, therefore, is an inadequate tool from a landscape perspective [T10-23, T10-24]. As a result, they would rather use some of the other tools available to them than rely solely on PFC [T10-25].

As previously noted, respondents believe that absence of NRCS support for PFC and the riparian initiative has resulted in a lack of participation by private landowners in the initiative and limited use of PFC on private lands. To many respondents, private landowners are seen as the missing link to the successful restoration and management of riparian areas. In order to address this shortcoming, the emphasis of the riparian initiative has shifted from a focus on training federal employees in the PFC method and implementing PFC on Federal lands to working with private land managers [T8-10]. Although most recognize that this is a needed step in the evolution of the riparian initiative, future BLM support for the riparian initiative may begin to wane because the management of private lands falls outside of the Bureau's mission and program responsibilities. As one D.C. official notes,

> I think as far as BLM's investment and responsibility for BLM managed lands, a significant amount of the work has been completed….I can't recall how many miles of stream there are in the U.S., [but] we have a pretty small percentage of them. This concept and this education and communication tool [PFC] is very valuable to expand the use on private land. [However,] the logical financial partner is one who delivers services already to private lands and that's, you know, the Department of Agriculture through Natural Resources Conservation Services. So far, our efforts to convince the right people within the NRCS that they should make an investment in this, that it would pay off in conservation, in better resource conditions, have not been…we haven't been successful in getting some funding dedicated to it…. ***I would still like to see teams traveling around, continuing to educate private land managers but I don't think it's BLM's place to pay for it.***

This quote illustrates a potential material constraint that may influence the future success of the riparian initiative in the future – the loss of financial resources for working on-the-ground with private landowners.

Institutionalization Process

Individuals interviewed highlight the extent to and manner in which PFC and the riparian initiative have been institutionalized within the various agencies as another important factor in determining success (Figure 3). The term 'institutionalization' refers to the formal commitment of political support and financial resources within an agency. According to respondents, the institutionalization of all programs and protocols within government bureaucracies is important in a positive sense because it helps ensure their long-term survival in the face of the constant change that defines such organizations. In the absence of such a formalized commitment of support, material factors relating to the workforce (e.g., employee turnover, administrative transfers, downsizing) and decreasing budgets constrain the continued success of the riparian initiative.

For instance, one change that threatens the long-term success of the riparian initiative is employee turnover at the field or non W.O. level (including local, state and regional levels). Since participation in the riparian initiative is not formally supported politically (e.g., it is not part of job descriptions) or financially (e.g., money is not directly allocated to fund training sessions) within the agencies, employee involvement in the extended riparian coordination network is influenced by whether potential participants have the support of their individual supervisors. Although supervisor support

is a necessary requirement for effective participation within the network, such support is not guaranteed. This presents a barrier because successful network members who change jobs and are uncomfortable asking their new supervisor for the support needed to take on additional responsibilities often terminate their involvement [T11-1, T11-2].

A second problem is the fact that network vacancies, which are created when members move or retire, must be filled by employees that have the supervisor support needed to effectively function in that role. Respondents note that one of the factors constraining the success of the Utah cadre is the fact that once the original cadre coordinator retired, the cadre could not find a replacement who shared the same level of supervisor support [T11-3, T11-4, T11-5]. In contrast, the Colorado cadre's success is attributed to the fact that both the previous and current cadre coordinators received a large amount of support, both politically and financially, from their supervisor [T11-6].

In addition to changes at the field level, respondents note that the continued success of the riparian initiative is also impacted by changes at higher institutional levels, which are strongly subject to political changes. Given the nature of politics in the U.S., changes in political parties heading the administrations often lead to bureaucratic changes (e.g., new appointees to leadership positions, shifting priorities, budgetary changes). According to respondents, this poses a problem for a number of reasons. First, NRST members lose important connections with and support from "the brass" when new agency leaders are appointed [T11-7]. New appointees on leadership and management teams are less familiar with and, therefore, less likely to champion the riparian initiative [T11-8]. Finally, as agency priorities shift in the face of changing political agendas, agency

support (including the allocation of financial resources and time) for employee participation in ‘extracurricular activities’ such as the riparian network often decreases [T11-9, T11-10, T11-11, T11-12].

In addition to determining long-term survival, the institutionalization of PFC and the riparian initiative is also an important factor in determining short-term success. Institutionalization refers to the process whereby certain employee actions and activities are encouraged while others are discouraged. It is carried out through requiring employees to report activities in certain categories that have been defined a priori and directly influence future program budgets. Regarding the riparian initiative, respondents most commonly noted failure as a consequence of an agency’s refusal to institutionalize PFC and network participation. Failures attributed to lack of institutionalization include limited use and misapplication of PFC, and reduced effectiveness of state cadres.

Regarding the Forest Service, respondents note that PFC is used less frequently, and often incorrectly, because the protocol is not institutionalized [T12-1], or “well integrated within the Forest Service way of doing business” [T12-2]. In other words, the Forest Service has not formally committed political support or financial resources to the use of PFC within the agency [T12-3, T12-4, T12-5, T12-6, T12-7]. In contrast, the BLM has been more successful in terms of using PFC because it has “dollars and [reporting] targets assigned to it” [T12-1]. Thus, the material context within which BLM employees operate provides more incentives for employees to participate in PFC assessments than the other sponsoring agencies.

In addition to expressing concerns over PFC, respondents also attribute failure, in terms of reduced "operational effectiveness" of state cadres, to the absence of formal political support for and allocation of financial resources to cadre responsibilities [T12-8]. Specifically, respondents note failure as a consequence of the fact that agencies have refused to recognize the role that employees play on state cadres [T12-9, T12-10] and to provide financial resources for PFC training [T12-11, T12-12, T12-13].

Although respondents recognize the importance of institutionalization, they also note that the manner in which programs and protocols are institutionalized within an agency is an important factor in determining success. That is, while institutionalization is necessary, there are appropriate and inappropriate means of institutionalization. Regarding the riparian initiative, the goal is to foster cooperative and coordinated management, and PFC is seen as a tool for advancing this goal. However, some respondents note that the manner in which the BLM has institutionalized PFC is "totally contrary to the intent of the initiative" because they have turned it into a "widget…or a unit of accomplishment" [T13-1].

According to respondents, this has caused a number of problems. First, the material context within which BLM employees operate provides less of an incentive to work together to complete riparian assessments because BLM districts are forced to meet district quotas and "compete for the same dollar" [T13-2]. Second, the institutionalization of PFC as the minimum standard for riparian areas within the Bureau has also constrained cooperation with permittees because it is often the basis for lawsuits against livestock operators [T13-3]. Finally, the use of PFC is driven by a management

objective or need to meet quotas (X miles of stream must be assessed) rather than ensuring that the assessments are conducted properly [T13-4].

Rather than simply highlighting problems with the BLM's institutionalization process, respondents also offer suggestions regarding the manner in which the initiative must be institutionalized in order to ensure success. First, the flexibility inherent within riparian program must be retained [T13-5,T13-6]. Second, structures must be created that support integrated decision-making within agencies [T13-7]. Finally, given that performance measurement is an important part of the institutionalization process, respondents note the importance of developing meaningful measures with which to track the success of the riparian initiative [T13-8, T13-9, T13-10, T13-11, T13-12]. The implications of this are further discussed in chapter seven.

Hierarchical System of Authority and Decision-Making

A third institutional factor that respondents identify as influencing success is the hierarchical system of authority and decision making (Figure 3). Although one of the characteristics across all bureaucracies is the existence of a hierarchy, they are not all organized in the same manner. Some hierarchies are more centralized (e.g., USFS and BLM), authority and decision making power is heavily concentrated in the upper echelons of the organization, while others are more decentralized (e.g., NRCS). Within centralized hierarchical systems, such as the USFS and BLM, top down-decision making and mandates are customary [T14-1]. Within decentralized hierarchies, such as the

NRCS, where state level employees have more authority, top down decision-making occurs less frequently [T14-2, T14-3].

Although top-down decision-making may occur less frequently in decentralized hierarchies, top level support for new programs and protocols is vital to their survival and success [T14-4, T14-5]. However, since institutional authority is layered within organizational hierarchies, field employees and middle management, as well as top level staff, must support institutional changes. Securing support at a variety of hierarchical levels has been problematic in a number of ways. First, because the decision to embrace PFC within the Forest Service was a top down mandate, there was not much support for this decision among field level employees [T14-6, T14-7, T14-8, T14-19]. This represents an important distinction between the USFS and the BLM. As previously noted (historical context), the BLM also mandated the use of PFC; however, the mandate came out in 1990. By the time the riparian initiative came about in 1996, the BLM, unlike the USFS, had already been "using PFC all over" [T14-10]. Furthermore, PFC was (and is) seen as (or perceived by both BLM and non-BLM employees to be) a BLM creation so there was more overall support for its use within the Bureau.

In addition to concerns regarding field level support for PFC, there are also concerns associated with acceptance of the "accelerated cooperative approach" (the riparian initiative) by middle management within both agencies [T14-11, T14-12,14-13]. Although the use of PFC was more supported within the BLM, there was not unanimous support for the riparian initiative by middle managers. The riparian initiative received even less support within the Forest Service. One of the primary reasons why the

initiative was not well supported at these levels was the manner in which it was communicated within the organization hierarchy. Many felt threatened by the fact that Wayne had 'jumped ranks,' within the BLM, the USFS and the NRCS (although most notably in the USFS and the NRCS[30]), in order to communicate his ideas regarding the creation of the riparian initiative.

The mere fact that a hierarchical system of authority and decision making exists within the agencies limits the opportunity for the informal exchange of ideas [T14-14]. This, in turn, constrains the flexibility and adaptability of agencies because a hierarchical framework results in a culture that is marked by a reliance on "chains of command" [T14-15]. Within such a culture, the substantive contribution or value of new ideas is often considered a lesser priority than the manner in which that idea was communicated within the agency. This presents a barrier to the support of new programs and protocols, such as the riparian initiative, within an agency because in order for new ideas to be accepted within an agency they must first progress through the appropriate "lines of authority.[31]"

Workforce Composition

The final factor that respondents identified as a barrier to the success of the initiative is the composition of the workforce within various agencies (Figure 3). According to respondents, workforce composition constrains success in a number of

[30] 'Jumping ranks' within the NRCS was largely a result of a misconception of the way in which the NRCS organizational hierarchy operated.

ways. First, over the last several years the agencies have been in the process of downsizing. This presents a barrier to the success of the initiative because people are focused on material constraints such as "keeping their jobs or worrying about the future" [T15-1]. Additionally, downsizing has left the agencies with a limited number of people to fulfill existing job requirements (material constraint) such as permit renewals [T15-2], plan revisions [T15-3], monitoring [T15-4], and NEPA consultation [T15-5]. The large workloads facing most agency employees has left little time for involvement in 'extracurricular activities' such as participation on the riparian network, or "building relationships and getting into the field."

Another problem with the current composition of the workforce is the fact that agencies do not employ enough experienced specialists to effectively perform PFC assessments (material constraint). In order to obtain valid results using the PFC protocol, assessments must be completed on the ground by journey-level, interdisciplinary teams. However, respondents note that PFC assessments are often not completed in this manner because specialist positions (e.g., soil scientists, geologists, hydrologists) have often remained vacant or been filled with people that have a more generalized background [T15-6, T15-7, T15-8], or existing specialists are already committed to meeting other program requirements [T15-9, T15-10]. Respondents note that PFC has been particularly problematic for the Forest Service, because they rely heavily on seasonals to complete field assessments rather than journey-level employees [T15-11, T15-12], as well as the NRCS, which is comprised primarily of generalists [T15-13].

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[31] It is important to note that this is also a problem within decentralized agencies, such as the NRCS depending on who the state and regional conservationists, and the Chief happens to be at the time.

Finally, respondents also attribute failure to the fact the riparian coordination network is comprised of primarily agency employees that are trained in the biophysical aspects of riparian management. Although it is important to have scientifically or technically trained specialists on the network, respondents note the objectives of the riparian initiative fall outside of the existing skill base. Individuals interviewed highlight the importance of diversifying the network and including some different disciplines and skills in order to enhance the social dimensions of this work (e.g., education, outreach, community aspects) [T15-14, T15-15, T15-16].

Summary of Key Issues

In summary, this section highlighted the fact that there is varying degrees of support for PFC and the riparian initiative across the three 'sponsoring' agencies. Specifically, both the use of PFC and participation in the riparian network is more supported by the BLM than the USFS and the NRCS. According to respondents, high levels of support have been more evident in BLM because PFC fits better within the Bureau's mission, and is an adequate tool for meeting their policy and program goals. Often, the same has not been said for the USFS and the NRCS. Additionally, respondents note that there is more ownership for PFC within the various levels of the BLM hierarchy as opposed to the USFS and NRCS. As a result of these two issues, the use of PFC has been institutionalized and is widely accepted within the BLM but not within the USFS or the NRCS.

This summary raises two interesting points for discussion. First, are the criticisms lodged against PFC legitimate? Second, what are the implications of establishing or not establishing ownership at the institutional level? Regarding the first discussion point, it seems that many of the people who reject PFC do so because they fail to embrace the principles underlying collaboration and the use of PFC as a communication tool. Rather, than judging PFC on whether it serves as an adequate tool for structuring and guiding a dialogue about riparian issues, they judge PFC based on whether it meets the traditional progressive era notion of success. In other words, does it provide quantitative information on which predictions regarding the effectiveness of future management options can be based? The decision to evaluate PFC based on such criteria sets up a straw man situation, one in which PFC is often knocked down.

It is important to recognize that the decision to rely on progressive era criteria is not determined simply by the individuals themselves; rather, it is determined to a large degree by the institutional context within which decisions are made. Institutionally, science has created a preference for quantitative knowledge. Furthermore, the power setting within which such institutions are placed has created a preference for hard data as well. Specifically, it is important to remember that within the land management arena many decisions are shaped and influenced by the Endangered Species Act and the threat of litigation. In other words, land management agencies are not the sole authorities regarding endangered species issues (which are often tied to water issues). Rather, their management decisions must frequently meet NMFS (National Marine Fisheries Service) and FWS (Fish and Wildlife Service) standards for ensuring species protection. Since

both NMFS and FWS are regulatory agencies and are frequently involved in litigation, they require the collection of quantitative data because it produces information that can be tracked and used in court. Thus, the preference for a reliance on quantitative data both within institutions and as required by the power setting in which these institutions operate is generally at odds with the collaborative mission of the initiative (and use of PFC).

The question of whether the critiques of PFC are legitimate also requires a consideration of the manner in which PFC is supposed to be applied (in theory) versus the manner in which it usually is applied on-the-ground. As many respondents pointed out, there is a notable difference between these two dimensions. In theory, PFC is designed to provide a tool that enables the production of a common understanding of riparian management across lay people and individuals with different disciplinary training and experience. The goal is to provide a forum for setting management objectives regarding future riparian conditions. The hope is that management options that result in improved riparian condition will be undertaken. However, designers of the PFC tool recognize that these management decisions are not simply agency decisions, nor should they be made by any one subset of interested publics for every riparian system at once. Rather, those management decisions are reserved for a public involvement process, a process that could further educate various publics and agency employees about important issues.

Regarding the use of PFC, the technical reference specifically states that PFC assessments must be conducted by an interdisciplinary, journey-level team in order to produce valid results. This requirement exists not only in an effort to increase

interdisciplinary communication (and thereby foster integrated resource management), but also to ensure that valid results are obtained from this qualitative assessment process. However, interview respondents note that it is a rare occasion when assessments are actually conducted in this manner. As noted within the institutional section, there are a variety of reasons why this is the case including the current composition of the agency's existing workforce, the manner and degree to which this process has been institutionalized within various agencies, and the determination of agency priorities.

Additionally, the goal of PFC is to provide a coarse filter regarding the condition of riparian areas so that management efforts can be focused in those areas where they are likely to have the biggest benefit (e.g., saving a stream before it becomes non-functional). It is supposed to function as a triage, so to speak. Rather than being driven by predetermined management goals and objectives, the process is supposed to direct decision making. Specifically, it is supposed to direct individuals' attention to areas where additional information is needed to determine riparian condition. For instance, if assessors determine that the answer to question number 5 in the PFC checklist (the uplands are not contributing the condition of the riparian areas?) is no[32], they are supposed to take additional steps to systematically evaluate the upland conditions and factors.

Finally, designers of PFC recognize that the assessment form does not provide information relating to management for specific objectives (e.g., fish). However, the collection of such information is not ruled out (nor is the addition of extra questions or

[32] The PFC checklist is designed so that all 'no' answers are negative and all 'yes' answers are positive.

the provision of additional types of information). The designers of PFC simply state that the objective is to foster cooperative management efforts to restore stream function first. Decisions regarding management options for the provision of specific riparian related values or outcomes should be saved until the stream system is in functioning condition. It seems, however, that a majority of the individuals who lodge this critique simply don't buy off on the concept of 'discussing function before values.'

Regarding the question of whether concerns regarding the legitimacy of PFC are valid, it seems that on some level they are. However, it is important to recognize that the criticisms reflect criticisms of agency implementation (or the way the tool has been applied within the agencies) rather than a criticism of the tool itself. Why has the tool been incorrectly applied so frequently? This leads us to the second point identified above, which relates to the concept of ownership.

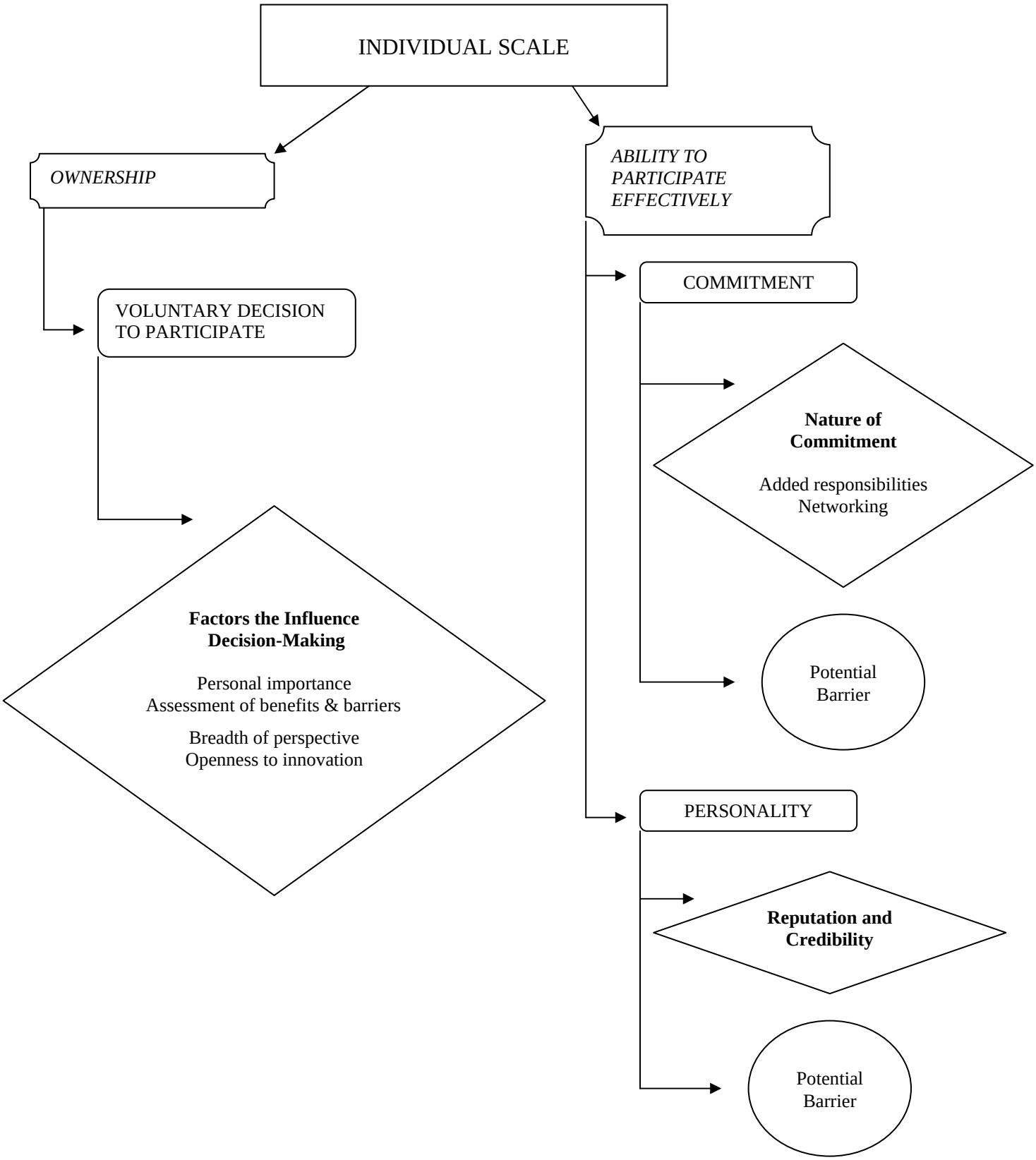
Unlike the concerted efforts to build ownership in and foster the voluntary decision making regarding participation (as discussed in the individual section), efforts were not taken in regards to building ownership and commitment at the institutional level – particularly within the USFS and the NRCS. Not only were similar efforts not undertaken at the institutional level, a series of decisions were made regarding PFC and the riparian initiative that actually undermined these efforts. As indicated by my analysis of the interviews, respondents highlight a tension between the need to demonstrate support at higher organizational levels (often done through mandates) and the need for building ownership across levels. As noted in Chapter 7, the NRST has recently invested

in a number of activities designed to foster this ownership particularly within managers (who have traditionally been neglected).

Individual Scale

How important is an individual to the success of the total initiative? In a mechanistic, bureaucratic, "assembly-line" or functional view, the specific individual is irrelevant. It is the function that a given position performs, regardless of the individual who fills it, that matters. However, when asked to reflect on the factors that facilitate and constrain the successful implementation of the initiative for accelerating cooperative riparian restoration and management, almost all respondents highlighted factors that reside within an individual. An analysis of the interviews indicates that respondents' discussions of individual factors can be described in terms of (1) whether an individual feels a sense of ownership in the decision to participate in the riparian initiative, and (2) whether he or she is able to participate effectively (see Figure 4). Within this section, the term ‘participant’ refers to both individuals who work to implement and advance the initiative (implementers), and those who attend sessions and work to apply the initiative’s tools and concepts on the ground (clients).

FIGURE 4: Individual Level Factors



Ownership in Decision to Participate

According to respondents representing the range of network components (NRST, state level cadres, agency program coordinators), the extent to which an individual feels a sense of ownership in the decision to participate (as an implementer or a client) in the initiative is an important factor in determining its success. A sense of ownership arises from a personal connection between an individual and the problems at hand, and a sense of responsibility for doing something about it. Ownership in the decision to participate in the riparian initiative (as a solution to the problems at hand) is created when individuals are involved in the decision-making process and feel that the outcomes reflect their interests (discussed below).

As indicated by the interview excerpts in Table #16, the significance of ownership as a constraining and facilitating factor was documented through both negative (its absence) and positive (its presence) examples. Of these two forms of documentation, interview respondents noted failure as a consequence of the absence of ownership more frequently. The general sentiment expressed by individuals interviewed was that individuals who do not feel a sense of ownership in the riparian initiative, are less likely to be committed to making it work and following through with its results. Specifically, such individuals (or groups, as indicated in the institutional section) do not participate in implementation activities [T16-1]. Additionally, these individuals are more likely to misapply PFC [T16-2] or misuse the riparian team [T16-3], because they lack a commitment to using the tool properly or lack ownership in the initiative's principles and agenda.

In addition to attributing failure to a lack of ownership among participants, respondents also associated success with the presence of ownership. For instance, one member of the NRST notes that individual landowners are more likely to carry out riparian management activities when they have ownership “in the idea”, or come to an understanding of the problem, solution and potential benefits on their own [T16-4].

Similarly, one D.C. level official notes that progress toward cooperative riparian restoration and management is made when a variety of people are able to get out on the ground together and come to a mutual understanding and acceptance of the problems and potential solutions [T16-5]. This sentiment is echoed by a one time PFC training session participant and landowner who states that he was more willing and better able to properly manage his riparian areas once he gained an understanding of the problems and solutions for himself [T16-6]. This individual later describes his experience as a PFC training session participant as "empowering" because he finally became aware of what he was doing right and wrong (ecologically speaking), rather than always having to rely on someone else's assessment of his management strategies.

Voluntary Decision-Making

In addition to discussing the importance of ownership as a key constraining and facilitating factor at the individual scale, respondents also identified voluntary decision-making as a method for encouraging a sense of ownership among participants (Figure 4). They argue that although it is important to have institutional support, the decision to participate in the initiative cannot be forced. For instance, excerpt T17-1 from a cadre

member expresses this concept. According to this individual, PFC training sessions are more likely to be successful if participants are attending because they want to attend. Specifically, he feels that the sessions are more dynamic, in terms of participants engaging in dialogue, when participants are not simply “going through the motions” because they are “required to be there.” Excerpt T17-2 illustrates a similar view from a member of the NRST. Referring to the use of PFC within the agencies, she notes that individuals are more likely to use this tool effectively if they are “working from their own convictions.”

When viewed across interviews, the importance of voluntary decision-making seems to be in tension with the desire of many respondents to increase the use of PFC and participation in the riparian initiative through the use of institutional mandates. As noted in the institutional section, network members feel that the lack of agency mandates to use PFC presents a barrier to the successful implementation of the initiative that could be easily remedied. However, some interview respondents also note a number of problems with the establishment of institutional mandates. One of these problems is the fact that in order to ensure the proper use of PFC, the decision to use this tool must be made by the individual [T16-2, T17-2]. Another NRST member notes that although she wishes there was a way to mandate or institutionalize PFC, she knows the decision to use this tool must "come from the heart" [T17-3].

In addition to discussing the importance of ownership and voluntary decision-making as a method for instilling individual ownership, respondents also addressed the question: What makes an individual choose to voluntarily participate in the initiative for accelerating cooperative riparian restoration and management? Respondents noted a

range of factors that influence an individual's decision to participate in the initiative. When viewed across interviews, these factors seem to fall into four distinct categories: personal importance, assessment of benefits and barriers, breadth of perspective, and openness to innovation.

At the most basic level, each person who is confronted with the decision to participate in the initiative faces the same fundamental question: is it worthwhile for me to personally invest in cooperation or in the management of riparian areas? According to respondents, an individual's interests influence his or her response to this question. Analysis of the interviews indicates that the concept of individual interests can be described in terms of 'personal importance' and ‘assessment of benefits and barriers’ – or an assessment of the costs relative to the benefits. A number of respondents also noted that an individual's decision to participate in the riparian initiative is affected by his or her outlook. An individual’s outlook refers to the manner in which he or she views the world at a particular time, and it is influenced by both ideal factors and the material context within which an individual is situated. Outlooks influence or shape individual understandings of interest and perceptions of benefits and barriers. According to respondents, individuals who choose to participate in the initiative share similar outlooks marked by a ‘breadth of perception’ and an ‘openness to innovation.’

Personal Importance

Personal importance refers to the level of importance that an individual places on particular issues (e.g., riparian management, initiative advancement). According to respondents, personal importance is a key factor affecting the success of the initiative

because it influences an individual's decision to participate in the initiative. As indicated by the interview excerpts in Table #18, the significance of personal importance as a facilitating and constraining factor was documented through both positive (participation when issues are important) and negative (failure to participate when issues are not important) examples.

First, respondents noted that individuals who are either personally interested in the management of riparian areas as an end in itself [T18-1], or as a means to advance other goals (e.g., provision of fish and wildlife habitat) [T18-2], are more likely to participate in the initiative. On the other hand, individuals who are either not concerned with riparian issues [T18-3], or who do not view cooperative riparian management as the most effective way to meet other objectives [T20-4], are unlikely to participate in the initiative. This presents a barrier to the successful implementation of the initiative because lack of participation by key stakeholders, such as environmental groups, in the collaborative process hinders the ability of a group to develop solutions to riparian management issues that can be implemented on the ground.

In addition to the level of importance that an individual places on riparian management, respondents perceived that the success of the initiative is also affected by the level of importance that an individual places on the advancement of this particular initiative. Although individuals may recognize the importance of the proper management of riparian areas, they may or may not see the initiative for accelerating cooperative riparian restoration as the best way to achieve this goal. Individuals who believe in the initiative are more likely to be motivated participants, or willing to go the extra mile in order to ensure its success [T18-4]. On the other hand, individuals who are not as

interested in this specific initiative, or its tools (PFC), are less likely to participate at all. This is particularly a problem regarding the NRCS (one of the three agency partners) because of the lack of participation by NRCS employees who are charged with implementing this initiative [T18-5].

Individual Assessment of Benefits and Barriers

Respondents also spoke of the decision to participate in the initiative as a reflection of an individual's assessment of benefits and barriers (Figure 4). As respondents pointed out, even those individuals who place high levels of personal importance on cooperative riparian management may be dissuaded from actively participating (as clients or implementers) because they perceive the ratio of benefits to barriers (costs) to be low. Additionally, respondents note that individuals (even those who share similar interests) perceive benefits and barriers differently. As seen in Tables 19 and 20, respondents discuss these differences with respect to individual willingness to engage in collaboration and riparian management.

An analysis of the interviews indicates that differences in individual perceptions of benefits and barriers can be described in terms of varying definitions of time frames and problems. Regarding collaboration, respondents note that not every individual is willing to engage in collaboration, as opposed to more traditional forms of decision-making, for many reasons. One of the reasons is the time commitment required to successfully participate in collaborative efforts. Even advocates recognize that collaborative efforts require a tremendous amount of nurturing, which may be cumbersome, time consuming and financially draining. Although this initially seems to

be a disadvantage, advocates see the short-term costs of establishing relationships and creating a common ecological understanding as a long-term benefit [T19-1].

In contrast, other individuals are dissuaded by the up-front time commitment required by collaborative attempts to resolve natural resource issues. According to respondents, it is especially difficult for members of the livestock community to commit to these efforts because of the material reality facing them. Often, livestock operators have so many responsibilities that must be attended to on a daily basis that they feel that they cannot afford the short-term time costs associated with collaboration. This has been evidenced by the limited amount of landowner participation in PFC training sessions, which usually last three full days [T19-2].

The time frame in which individuals assess benefits and barriers also has an impact on voluntary decisions to engage in riparian management. For instance, respondents note that some ranchers perceive riparian management as a short term economic cost [T20-1, T20-2]. In contrast, others perceive riparian management as a means for ensuring long-term profitability of their livestock operations [T20-2, T20-3]. Like the situation regarding collaboration, individuals who assess benefits and barriers in terms of longer time frames are more likely to participate in riparian management activities. Often, individuals are able to focus on longer time horizons if they are not faced with substantial material (e.g., financial, time) constraints in the short-term.

Another way that respondents discussed differences in individual perceptions of benefits and barriers was in terms of problem definition. In other words, individual perceptions are shaped by the way in which individuals construct the nature of problems

on the ground. Some individuals define resource management issues as simple problems that can be easily solved through short-term action such as litigation and regulation, while others do not define the problem in terms of natural resources at all. On the other hand, there are individuals who see resource management issues as complex problems that can only be resolved through cooperation with others.

Regarding decisions to participate in collaborative activities, some individuals are unwilling to engage because they do not trust the process or potential partners [T19-3]. Such individuals are unwilling to 'give up control' and work with others to develop resource management strategies, because they believe that their interests are best served through a continued reliance on litigation and regulation. In a number of instances they are right. Given the nature of the agency planning process, many environmentalists feel that their interests are often served just as well by a short-term action, such as a court order stall or no action, as they are by the creation of a long-term sustainable solution to natural resources issues [T19-4]. In other instances, individuals do not feel that the design of long-term resource management strategies serve their interests because they directly benefit (politically or financially) from using litigation to keep Federal agencies in court and resource management in a state of gridlock [T19-5].

Those individuals who choose to engage in collaborative decision-making do so because they believe that it is the best method for solving problems on the ground. More specifically, these individuals recognize that natural resource issues are complex and that there is often more than one side to the story. In turn, they value the contributions of other disciplines, as well as the contributions of individuals who have significant experiential knowledge. Excerpts T19-6 and T19-7 highlight this difference in

predisposition with regard to agency employees. According to one landowner and current cadre member, trust is eroded when agency 'experts' use their disciplinary training to retain a sense of control. Collaborative relationships can only be developed when the individuals involved recognize the benefits that come from giving up their need to retain a sense of control, and are able to "stop playing games" and "give it the old college try" in terms of getting things done on the ground [T19-7].

Respondents also note that the manner in which individuals define the problem impacts their assessment of benefits and barriers in relation to riparian management. For instance, one respondent notes that some members of the 'environmental community' are unwilling to participate because they view riparian management as a band aid solution rather than an attempt to address the real issues (e.g., federal lands grazing). Other members, however, believe that a focus on riparian management provides the common ground needed to develop long-term sustainable solutions to current environmental problems such as urban sprawl [T20-4].

Breadth of Perspective

The third important factor identified by interview respondents regarding whether individuals will voluntarily choose to participate in the riparian initiative was ‘breadth of perspective’ (Figure 4). As indicated by the interview excerpts in Table #21, the significance of perspective as a constraining and facilitating factor was documented through both negative (narrow perspective) and positive (broad perspective) examples. Most commonly, interview respondents noted failure as a consequence of an individual's

tendency to view the world from a narrow perspective [T21-1]. Individuals who hold a narrow perspective are more likely to be myopic, rather than recognize and embrace the interconnectedness inherent in both social and ecological systems (broad perspective). According to respondents, a number of factors influence an individual's tendency to be myopic rather than broad visioned, including: idealism of youth [T21-2], lack of experience [T21-3], job pressures [T21-4], and the fact that it is human nature to "focus in instead of broaden out" [T21-5, T21-6].

At the same time, those who see the initiative as successful attribute it to an individual's ability to see the broader perspective. For instance, one respondent attributes the success of the initiative to Wayne's ability to recognize the interconnectedness of riparian systems [T21-7]. A review of the complete interview indicated that this comment was made in regard to the fact that Wayne’s focus on interconnectedness represented a noteworthy break from the dominant form of riparian research in the 1970s, which was focused on ascertaining cause and effect through site specific experimentation.

In addition to attributing success to the breadth of vision held by specific individuals, respondents who advocated for PFC as a tool often did so because it enables individuals to be more open-minded. In their view it helps people to better grasp the big picture and it forces them to recognize the contributions of others [T21-8]. In other words, advocates of PFC perceived a good fit between the world view necessary to realize the goal of sound riparian management and PFC as a means of fostering that sort of vision within individuals.

Openness to Innovation

Finally, respondents identified individual ‘openness to innovation’ as the fourth individual level factor affecting whether individuals voluntarily choose to participate in the riparian initiative (Figure 4). As demonstrated by the interview excerpts in Table #22, respondents attributed both failure and success to an individual's willingness to do things differently. Instances where the initiative failed to produce the intended results were attributed to an individual's inability to 'step outside of the box,' so to speak. For instance, one respondent notes that individuals often do not accept PFC as an innovative and valid assessment method because they are wedded to the particular method with which they are personally familiar [T22-1]. Another respondent attributed failure to the inability of individuals who work in a regulatory capacity to embrace PFC as an innovative approach to riparian assessment and management because of its reliance on qualitative data rather than the traditional collection of quantitative data [T22-2].

In addition to discussing the importance of working with individuals who are open to innovation, respondents also identified the conditions under which innovations occur (acceptance of new riparian management and decision-making strategies). Regarding the acceptance of innovative riparian management strategies, respondents often highlight the traditional reliance on cultural and generational wisdom within the ranching community as a barrier. They argue that an individual’s willingness to adopt new and innovative grazing strategies is enhanced if they have already been exposed to nontraditional ideas, which is largely influenced by their material reality and ability to do different things, such as attend college. Excerpt T22-3 illustrates this point. Respondents also discussed the conditions required for successful collaboration (as an innovative

approach to decision-making). One respondent, in particular, provided a very pessimistic view of collaboration as a problem solving approach. Based on his personal experience, willingness to accept innovation (or at least the innovation of collaboration) occurs only after "all other possible avenues have been exhausted" [T22-4].

Summary of Key Issues

According to respondents, the extent to which an individual feels a sense of ownership in the decision to participate in the initiative is a key constraining and facilitating factor. Furthermore, respondents note that in order to encourage such a sense of ownership among participants, the decision to participate in the initiative must be a voluntary one. That said, what makes an individual voluntarily choose to participate in the initiative for accelerating cooperative riparian restoration and management? An analysis of the interviews suggested four particularly influential factors at the individual scale: personal importance, assessment of benefits and barriers(including an assessment of both ideal and material dimensions), breadth of perspective, and openness to innovation.

Specifically, respondents note that individuals are more likely to voluntarily choose to participate (implementers or clients) in the riparian initiative if they feel that such a decision advances their interests. Individuals are motivated to participate in the initiative because the issue is important to them personally, or they perceive the benefits of participation to be large in relation to the barriers. Respondents also note that an individuals' outlook, which is shaped by a structural and material reality, influences the manner in which they define their interests and decide whether they are advanced through

participation in this initiative. Individuals who are in a position to have a broad perspective and are open to innovation are more likely to choose to participate in the riparian initiative.

Interview respondents typically noted the importance of each of the four factors mentioned above; however, many shared a relatively pessimistic view regarding their ability to influence their existence. Although respondents felt that these factors were required for success, they often felt that the presence or absence of such characteristics was out of their direct control. As a result, the general sentiment was to 'work with the willing.' In other words, respondents noted the importance of finding situations in which these characteristics exist and individuals have already voluntarily chosen to engage in cooperative riparian management [T23-1, T23-2], rather than trying to use PFC to "change people's minds" [T23-3, T23-4].

This represents an interesting finding in light of the goal of the riparian initiative. As noted in Chapter 4, the riparian initiative is designed to create and engage a critical mass of people in the cooperative management of riparian resources. One of the main objectives of the initiative is to increase individual awareness of the importance of riparian areas. In other words, the strategy is designed to foster the development of a sense of personal connection to and shared responsibility for the management of riparian resources across a wide range of individuals (establish common needs or concerns). Additionally, the strategy is designed to influence individual perceptions of the benefits and barriers associated with cooperative riparian management. Specifically, the objective is to demonstrate the wide range of benefits and values that are produced from functioning riparian areas. In an effort to broaden individual perspectives, the strategy

incorporates the use of the PFC tool and a landscape focus. Finally, as noted in Chapter 4, the strategy is designed to create a 'safe environment' for discussing and resolving contentious issues through the use of PFC (provides common focus) and non-threatening, respectful communication (see interview excerpts in Table 12). According to one respondent, Wayne in particular excels at this form of communication because "he leaves everybody with their dignity" [T29-1]. Discussing the role of communication in achieving common ground among diverse groups, Peterson and Horton (1995) argue that the use of communication that responds attentively to an audience's perspective assists in the negotiations of common ground among diverse participants. Thus, it is through the creation of forums for such dialogue that the riparian initiative imbeds ownership in and enhances the willingness of individuals to participate in cooperative riparian management.

Rather than simply working with the willing, the intent of the initiative is to foster the development of conditions that enhance individual willingness to engage in cooperative riparian restoration. In short, the strategy is designed to create ownership in problems, solutions and potential benefits. Therefore, this finding highlights a shortcoming of the initiative in that network members do not always live up to the principles of the initiative.

Ability to Participate Effectively

As previously noted, respondents argue that individuals who are forced to perform a task are less likely to do it well. However, that is not to say that all individuals who voluntarily choose to participate in the initiative are successful. As with most things in

life, individuals who possess certain traits are able to perform some tasks better than others. With regard to the riparian initiative, a sense of ownership in the decision is a necessary prerequisite for effective participation but this factor alone does not guarantee success. According to respondents, truly successful participants (in terms of implementing and applying the initiative) are very committed to the initiative and have a certain degree of initiative, motivation, or passion that drives them to 'go the extra mile' (Figure 4). Additionally, effective participants have a certain predisposition or personality that enables them to successfully interact with others.

Commitment

When asked to reflect on the factors that influence the success of the riparian initiative, respondents representing diverse network components noted the importance of an individual commitment (Figure 4). As demonstrated by the interview excerpts in Table #24, respondents attributed both success and failure to the presence and absence of commitment. Most commonly, interview respondents attributed the success of the initiative to the presence of commitment among NRST [T24-1, T25-1] and cadre members [T24-2, T24-3]. At the same time, failure was attributed to the absence of commitment. For instance, respondents attribute the Utah cadre's inability to organize and teach PFC training sessions to a lack of commitment within cadre members [T24-4].

Commitment to Added Responsibilities

Given the nature of the initiative, participant (implementers) commitment in terms of willingness to shoulder additional responsibilities, or 'willingness to give something

up’ is necessary for success. For instance, respondents attribute success to network members, particularly the NRST, who are passionate about "what it is we're trying to do" and have been "willing to commit more than just eight hours a day, five days a week into it" [T25-1]. Unlike NRST members who work full-time implementing the riparian initiative, other network members (state cadres, agency riparian coordinators, volunteer private members) incur implementation responsibilities in addition to their full-time jobs. Those who have been successful have demonstrated a willingness (and ability) to commit to these extra responsibilities. Respondents attribute the success of the Colorado cadre to the fact that members "have a passion" and are "willing to give something else up" in order to participate [T25-2, T25-3]. Other network members, however, may not be in a similar position (financially or time-wise) and thus are unable to make such commitments.

Commitment to Networking

In addition to an individual's willingness to shoulder additional responsibilities to implement the initiative, respondents also discuss the importance of an individual's commitment to building interest in and support for the initiative through formal and informal networking. For example, networking "on my own time" has always been an important component of agency efforts aimed at involving diverse stakeholders in the management of natural resources [T25-4]. The same is true regarding the initiative for accelerating cooperative riparian restoration and management. According to one cadre member, the difference between successful training sessions and unsuccessful ones, in

terms of engaging a diverse group of participants, is an individual's commitment to taking an "active role" in promoting these sessions [T25-5].

Beyond networking simply to build stakeholder or client support, respondents also note that it is also necessary to network in an attempt to build political support for and allocate financial resources to new initiatives such as the riparian initiative within bureaucratic organizations [T25-6]. Across a number of interviews, respondents attributed the success of the riparian initiative to the fact that it has received a lot of political support within the agencies (especially within the BLM and the USFS). Art suggests, the riparian initiative has advanced within the agencies because, unlike other similar initiatives (e.g., upland health assessment) that haven't seen as much success, this initiative receives a lot of political support because of Wayne's connections within the agencies [T25-7]. In discussing Wayne's existing political connections, another respondent notes that it is important to remember he wasn't "ordained by God;" rather, Wayne is where he is today because he was committed to creating relationships when he was young and maintaining them throughout his career [T25-8]. The success of the riparian initiative is also attributed to the deliberate efforts that are presently made by various team members to develop new political connections and sources of financial support for this work [T25-9].

In summary, respondents noted that the nature of participation (implementers) required for the success of this type of innovative initiative was one that reflected an individual willingness and ability to shoulder extra responsibilities, and to network and build political support. In the absence of these characteristics, particularly among

leaders, respondents believed that the initiative would not move forward. Specifically, respondents attributed a large degree of the success of the NRST and various cadres to the presence of strong leaders, or individuals that are willing to "invest energies in certain ways and to bring enthusiasm" [T26-1, T26-2] and are good "cheerleaders" [T26-3, T25-7]. At the same time, respondents documented the absence of strong leaders as a key constraining factor. For instance, respondents spoke of once successful cadres that seemed to "fall apart" when key individuals left the group [T26-4, T26-5]. Another respondent, reflecting on his personal experience with other groups, wonders how the riparian initiative will be affected when Wayne, the “kingpin in the National Riparian Service Team," leaves the group [T26-6].

Commitment as a Potential Barrier

Most commonly, respondents view commitment as a key individual level factor in determining success. However, one respondent had a different perspective. This individual argued that high levels of personal commitment may also present a barrier to the continued success of the initiative because participants become set in their ways, and are no longer open to new ideas or methods [T27-1]. Review of the entire interview text indicated that this comment was made in reference to this individual’s perception that the NRST’s vision is too narrow because they are wedded to the PFC tool. In other words, he feels that the team’s investment in PFC (a tool which is supposed to broaden people’s visions) has actually limited their willingness to embrace the use of alternative tools. This individual respondent expresses concerns similar to other respondents who

expressed a desire to employ a variety of tools in order to achieve cooperative riparian management rather than simply relying on the use of PFC in all circumstances. The implications regarding the NRST's close association (real and perceived) with the PFC tool are discussed in detail in chapter seven.

Personality

According to respondents at a variety of levels within the initiative (cadre members, regional coordinators, NRST members and D.C. officials), 'personality' is another important factor in determining the success of the initiative. As indicated in Table #28, interview respondents attributed failure to individual personalities and problematic past relationships. According to one Forest Service employee, a history of personality conflicts and poor relationships with Washington Office employees has contributed to a lack of participation by some Forest Service employees [T28-1]. Other respondents cite instances where landowners are unwilling to participate in an agency sponsored initiative because of "experiences they've had with personalities in the various agencies in the past" [T28-2, T28-3].

Respondents believe that the ability to successfully implement the riparian initiative is influenced not only by one's personality, but also by the personalities and resulting relationships from the past. However, they also note that the success of the riparian initiative is linked to the willingness of network members to facilitate the rebuilding of trust and relationships and the establishment of common needs across public and private landowners [T28-4, T28-5, T28-6, T28-7, T28-8]. At the same time, respondents attribute success to the ability of the network members, particularly the

NRST, to foster such an environment. Specifically, success is seen as a consequence of the personalities or character traits of individual members of the National Riparian Service Team including: humility [T28-9, T28-10, T28-11], empathy [T28-12], respect for each other [T28-13], and the ability to communicate in a “non-threatening fashion” [T28-14, T28-15].

Reputation and Credibility

In addition to highlighting specific character traits, a number of respondents also view an individual's reputation and credibility as an important factor in determining the success of the riparian initiative. As indicated by the interview excerpts in Table #29, the significance of an individual's reputation and credibility as a facilitating and constraining factor was documented through both positive (individuals have it) and negative (individuals do not) examples. Most commonly, interview respondents attributed success to the reputation and credibility of specific members of the National Riparian Service Team. According to respondents, these individuals have established a reputation for credibility through the nature of their past interactions and experience [T29-1], their disciplinary background [T29-2], their persona [T29-1, T28-14], and their political connections or ‘who they know’ [T29-1,29-3]. At the same time, respondents attribute failure, in terms of lack of participation, to the fact that most cadre members do not have the same "legendary status" as members of the NRST [T29-4]. Specifically, one cadre member recalls one instance where a specific rancher, from whom the cadre had been

trying to solicit participation, finally attended a PFC training session simply because key members of the NRST were co-teaching the session [T29-5].

Reputation and Credibility as a Potential Barrier

Although most respondents note that the reputation and credibility of national team members has advanced the initiative in many ways, some network members also perceive it as a barrier. For instance, one respondent believes that the "high powered" reputation of certain team members stifles the type of open and honest dialogue that needs to occur because people are afraid to disagree with Wayne, given his political clout [T30-1]. Additionally two respondents, who stand in stark contrast to most respondents, lament the fact that having such political clout has also conferred a sense of arrogance among team members, which has resulted in an unwillingness to consider the critiques of other professionals [T30-1, T30-2]. The implications of this difference will be further explored in Chapter 7 as part of discussions comparing the riparian initiative to the dialogic model of collaboration.

Summary of Key Issues

As noted in Chapter 5, interview respondents identified 'existence of a functioning network' as a prerequisite for achieving success in meeting larger initiative goals and objectives. So what are the characteristics of 'functioning' teams and cadre? First, respondents note that individuals must have ownership in the decision to participate as a network member. They note that this is particularly important with regard to

participation in the riparian initiative because a high level of commitment, the kind that arises through a sense of ownership, is required for effective participation. This is because most of the network members must be willing and able (e.g., financially) to voluntarily accept implementation responsibilities in addition to their existing job responsibilities. In addition to a sense of ownership and the commitment required to carry-out implementation activities (e.g., schedule, organize and conduct PFC workshops), respondents attribute success to the presence of individual network members (leaders) who willingly commit to responsibilities beyond the basics of program implementation. Specifically, respondents highlight the importance of networking or outreach efforts initiated in order to build interest and political support.

Returning to the notion of a 'functioning network,' respondents note that there has been varying degrees of operational effectiveness within the network. As indicated in Chapter 5, most respondents feel that the NRST is functioning effectively as a team. As a result, they have been able to provide quality services and document important site-specific examples of on-the-ground success. An analysis of interviews indicates that the nature of participation by NRST members is one that reflects characteristics mentioned above. First, the NRST has the relative luxury of having initiative implementation as their full-time job. That is not to say that they do not demonstrate a commitment above and beyond the forty-hour work week, or a 'willingness to give something up.' On the contrary, the nature of program implementation requires a lot of traveling on personal time. Additionally, team members often engage in activities outside of work in order to provide additional opportunities for dialogue and networking (e.g. social events, meals, etc.).

The difference between the NRST and most network members is the fact that the NRST are able to address basic implementation responsibilities as part of their full-time job, which allows them additional time to focus on networking to build interest and political support. Most network members do not have this luxury; rather, they often have already committed time outside of work to address basic implementation issues. As a result, most do not have any time to shoulder additional responsibilities. Furthermore, the NRST is comprised of seven highly motivated and committed individuals. In my opinion, it is the nature of this situation that enables the NRST to 'work with the unwilling' as well as the willing.

As noted in the previous section, the goal of the riparian initiative is to create and engage a critical mass of individuals representing diverse interests and affiliations in the cooperative management of riparian areas. However, many network members discussed a propensity to work with the willing rather than trying to create situations that fostered willingness. Based on my analysis of the data and my personal observations, the reason for this seems clear. Many network members are struggling to commit at all to participation in the riparian initiative. For instance, the Utah cadre is struggling to get its members to commit to teach a session period. Thus, it is unlikely that these individuals would be willing to take on the extra responsibilities associated with soliciting participation from 'non-traditional' or 'unwilling' partners (a number of cadre members noted that they have had difficulty organizing and instructing a session to whomever shows up).

The Colorado cadre has had more success in terms of getting basic commitment from its members. Furthermore, a number of members (particularly the coordinator)

have demonstrated a willingness to ‘go the extra mile’ in terms of trying to solicit interest from diverse participants (extensive concerted outreach efforts), and engage individuals who have traditionally been unwilling to participate (e.g., developed shortened PFC course to encourage landowner participation, hosted PFC for managers course). However, they have been considerably less successful than the NRST is this regard (but they have been more successful than most state cadres in terms of soliciting diverse participation).

Again, the reason for this is simple. The NRST has much more time to commit to encouraging the participation of non-traditional or historically unwilling participants. Not only is the team comprised of seven highly motivated individuals, but one of those positions is devoted specifically to outreach and another is devoted specifically to public affairs. Thus, they are better able to foster an environment in which individuals are more likely to voluntarily choose to attend or participate in a service trip or PFC workshop. Furthermore, respondents note that members of the NRST, unlike most network members, posses a certain reputation and credibility that enhances their ability to draw the participation of non-traditional partners or historically unwilling individuals. Finally, respondents note that NRST members posses certain character traits which enable them to foster ownership or the voluntary decision to engage in cooperative riparian management through the creation of a ‘safe atmosphere’ during the sessions themselves (previously discussed).

Recognizing that individual personalities are somewhat out of the control of the riparian initiative, the remainder of this section explores the question: Why have cadres been unwilling or unable to shoulder the additional responsibilities associated with the

riparian initiative? As further addressed in the following section (chapter discussion), this has been shaped to a large degree by the existing institutional context in which these individuals are placed and the fact that there are differing levels of support across agencies. As a result, an individual network member's willingness and ability to commit is influenced by their consideration of whether the issue is personally important to them, whether they feel the benefits of outweigh the barriers to or costs of participation, and whether the structural and material reality within which they are positioned allows them to hold a broad perspective and are open to innovation. However, this decision is also significantly influenced by the way in which their supervisors individually respond to these questions as well. As addressed in the institutional section, the current context in which these individual decisions are made poses a number of formidable barriers to participation as a network member. Although, in many ways, lack of agency support is one of the main factors limiting the success of the riparian initiative, network members are currently unable to devote additional time and resources to building political support and securing financial resources for the initiative. As a result, this large task is addressed solely by NRST members.

Discussion

As noted in chapter 4, the overriding goal of the riparian initiative is to engage a critical mass of people, representing diverse backgrounds, in the cooperative restoration and management of riparian areas across boundaries. The strategy is designed to develop a common understanding and increase awareness through the provision of services (service trips and PFC workshops) that are geared toward education and information

sharing. The strategy is based upon an implicit assumption that individual's will voluntarily choose to alter their behaviors as a result of these services.

In chapter 5, I provided a discussion regarding the evidence of on-the-ground success in terms of increased communication and cooperation and improved riparian health. The general sense was that there were important case-by-case examples of success; however, there was less evidence of improvement across a large scale. Recognizing the inherent problems with evaluating the riparian initiative solely in terms of on-the-ground outcomes, respondents identified three additional dimensions (or stages) of success: the achievement of increased awareness, the provision of quality services and the existence of a functioning network.

In Chapter 5, 'quality services' were discussed in terms of (1) quantity of people reached, (2) customer satisfaction, (3) increased knowledge, and (4) diverse participation. An in-depth analysis of the interviews (Chapter 6), however, indicates that success is linked to the creation of environments that foster individual ownership in the decision to participate in the riparian initiative. As respondents note, ownership is engendered in individuals when they voluntarily choose to participate rather than being forced. Respondents also note that there are four factors that influence whether an individual will voluntarily choose to participate including: personal importance, assessment of benefits and barriers, breadth of perspective, and openness to innovation. Thus, quality services in terms of the riparian initiative can be identified according to whether they create environments in which individuals recognize their personal connection to riparian resources and their neighbors, as well as the benefits that can be incurred from working together to restore and maintain riparian function. Additionally, quality services are ones

that provide safe atmospheres for broadening individual perspectives and fostering openness to innovation.

As previously noted, respondents also identified ‘diverse participation’ in service trips and PFC workshops as an indicator of quality services. This is because having diverse participation fosters the development of a more engaging learning environment and aids in the creation of ownership and trust among stakeholders. However, respondents also note that individuals should not be forced to attend because individuals who are forced are often ‘going through the motions’ as opposed to truly engaging within these sessions. In other words, respondents recognize that although it is important to have diverse participants, individuals cannot be forced to participate. This leads us to a very important question: What about those individuals who need to participate in service trips and training sessions either because they are an important player in the decision making process, or because they represent an interest that had been traditionally excluded from riparian issues (non-traditional partners)?

As indicated in Chapter 6, responses from a number of individuals interviewed indicated that they resolved this issue by a propensity to ‘work with the willing.’ In other words, cross your fingers and hope that a situation where individuals who already feel a personal connection to riparian areas and their neighbors, recognize the benefits produced by engaging in cooperative efforts designed to restore and maintain riparian function, hold a broad perspective, and are open to innovation presents itself. That is not to say that this perspective is bad. On the contrary, working with individuals who already exhibit these characteristics is likely to demonstrate the most benefits. In other words,

providing training and consulting services to these types of individuals may be just what they need to stimulate the next step - implementing change on the ground.

However, as indicated in Chapter 5, the riparian initiative has reached a lot of people in the last six years – but we have not seen as much evidence as large-scale on-the-ground change as we would have liked. Why? Based on my analysis of the data and my observations, I believe that a significant portion of these efforts were dedicated to preaching to the choir rather truly addressing the contentious issues that are limiting riparian improvement on the large scale by working with the unwilling. For example, cadres members are more likely to sponsor and instruct PFC workshops for whomever decides to attend rather than soliciting (networking) participation from diverse and traditionally unwilling groups. This raises two important questions: Why is there not more of an effort to work with the unwilling? Why is there not more of a focus on creating environments that foster ownership and voluntary engagement in cooperative riparian management.

These questions are answered by a consideration of the fourth dimension of success (existence of a functioning network) and the conditions necessary for this to occur. As previously noted, an analysis of interviews indicates that network members (like clients) must have ownership in the decision to participate in the riparian initiative because a certain level of commitment is necessary for effective participation. Specifically, network members must be willing to shoulder additional responsibilities and network to build interest in and support for the riparian initiative. Furthermore, network members must also posses experience and personality characteristics that are often different from those required to meet their existing job responsibilities.

Regarding the existence of a functioning network, respondents noted that there have been varying degrees of operational effectiveness within the network. The NRST is seen as functioning successfully, and has demonstrated important examples of on-the-ground success. Based on my analysis and observations, this success can be attributed to the fact that team members are able to commit full-time to implementation efforts, as a result they are able to spend additional time engaged in responsibilities that come with soliciting participation from diverse or traditionally unwilling participants. Furthermore, team members have an existing reputation that enables them to draw such participants to the table and a set of personality traits that enables them to create environments capable of fostering ownership and voluntary behavior changes.

Cadres, however, have not enjoyed the same level of success as the NRST in terms of achieving on-the-ground success. Some cadres (Utah) have been unable to simply host training sessions, while others (Colorado) have demonstrated a determination to 'go the extra mile' in terms of soliciting interest and building support. However, as noted in Chapter 5, even the 'functioning' cadres have often been unable to attract diverse and traditionally unwilling participants. Respondents attribute this to the fact that network members, unlike the NRST, are often unwilling to shoulder the extra responsibilities that come with fostering voluntary decision making at the individual scale and they are often less well-known (lack type of reputation and credibility needed).

Regarding the fact that most network members are unwilling to shoulder the responsibilities associated with 'working with the unwilling,' it is important to remember that this does not mean that they simply do not want to do it. Rather, it means that that current situation or context does not make it worth their while (costs outweigh benefits).

As previously noted, individual network members, as well as clients, must voluntarily decide to participate in the initiative. Respondents note that four individual level factors influence this decision. These are considered individual level factors because they are characteristics of individuals; however, these factors are shaped by the structural and material context within which an individual is placed. For most network members and clients, these factors are shaped by institutional level factors. Specifically agency support.

In many ways lack of agency support is currently the limiting factor with regards to the success of the riparian initiative. This is the case because the existence and successful implementation of this initiative is inexorably linked to the institutional context within which it operates. As a whole, institutions generally do not support the type of innovation and risk taking that is required within the riparian initiative. Additionally, the institutional environment itself is one in which priorities shift with changing political administrations, which operate at time frames that oppose the long-term commitment necessary to the success of the riparian initiative. Finally, given the dominant role of science within institutions, as well as its influence over the 'power setting' within which land management agencies operate (e.g., regulatory driven, decisions often based on litigation), a preference for quantitative knowledge has been established that may be at odds with the collaborate mission of this initiative.

As a result of this decision-making context, many clients (typically agency employees) do not voluntarily choose to use PFC or engage in collaborative riparian management because the barriers (costs) currently outweigh the benefits. Furthermore, this context has also made it difficult to encourage the participation of new network

members. As a result, the institutional context within which the riparian initiative operates is actually threatening its survival. The implications of this last point are addressed in chapter seven.

TABLE #8 - IMPORTANCE OF AGENCY SUPPORT

Differing Degrees of Support Across Agencies:

One of the barriers, or really the problems with PFC [is the fact that] ***the BLM is really committed, they started it and it's their process.*** Even though we've got this document and this strategy that was signed, ***the Forest Service in general, and I don't like to use the term 'haven't embraced it,' but it hasn't been stressed***. (Cadre-1) **T8-1**

It still seems like the Forest Service has had real shoddy implementation as far as some forests seem to have embraced it wholeheartedly and have assessed their streams using it and other forests more or less ignore it. *Whereas I think BLM as an agency has done a lot better job of making an initial assessment on all of our streams worldwide using that methodology, and then our reassessments and follow-ups use the same methodology.* ***I think the Forest Service nationally hasn't made a strong enough push to adopt it as the standard.*** (Cadre-2) **T8-2**

I feel that we've done an awful lot in three years. And yet, at times if I put it in perspective of how much has the behavior and thinking and program work of the Forest Service as a huge land management government agency. I'm not sure that we've made too much headway there yet. I'm not saying some hasn't been made but I'm saying when I think of the number of people within [the Forest Service] that don't even know about the accelerated cooperative approach and here it's a 'sanctioned by the chief' effort that created us, I'm saying there's something wrong here, there's really something wrong here. Gosh, it seems like we could have made more of an effect in that big bureaucracy than we have by now. (NRST-1) **T8-3**

I think it's been less successful in the USFS [in terms of being integrated into the agency structure] than it has been within BLM, but BLM already had a fair amount of ownership in the process. Unfortunately, NRCS has really not played the role that we originally thought they could play. (D.C. Official – 1) **T8-4**

Consequences of differing support levels:

The real kind of foundation is the BLM people, they really are. In fact, there is more BLM cadre coordinators than any other agency, then Forest Service, and [then] NRCS. (NRST-2) **T8-5**

I don't know why, but there isn't as strong of a BLM component here in Utah, as there was in Colorado. The BLM seemed to drive it more in Colorado. Some of the documents that I have seen here, and communicating with various people, there didn't seem to be that strong leadership from BLM here....It may have been that the Forest Service felt, and again I wasn't here so I really don't know, that they just didn't want to be involved. ***But I have noticed there's a stronger leadership [coming from the] BLM overall [in terms of the leading the riparian initiative***], a really strong working relationship. (Riparian Coordinator – 1) **T8-6**

With individual agencies I think we've had some real benefits, interagency there's been some benefits, ***but we don't have the private sector involved and that's the tough one.*** And that's the people you really need to reach. (Cadre –1) **T8-7**

I think there's been a few limited, you know, in totality, ***there's been very limited real work on private lands across the country using PFC***, like the team going out doing assessments. (D.C. Official – 2) **T8-8**

We're trying, but we haven't done a great job of dragging landowners, property owners into this. [That's a problem] because is you look at the land map of the west and write down where the creeks are, they're on private land. (Cadre – 3) **T8-9**

So we're kind of running out of people to attend it [PFC training sessions] from the agency side… [Initially], it was really, I want to say intentionally stressed, but that [agency employees] was the ready audience that was out there doing the training. ***[But now,] I'll call it a policy change, the focus [of the riparian initiative] is to really reach outside that [agency employees] and involve a lot of other public folks, you know, the private side. But, that's not really easy to do***… (Cadre – 1) **T8-10**

I guess a major [issue], when you interface with the private and public lands, is trust. ***That's probably one of the bigger barriers to this is trust of... not any particular, but just government employees versus private people.*** What are you out here for and what do you want? (D.C. Official – 2) **T8-11**

To expand on the whole thing you were talking about the advantages and disadvantages, what have I seen that it's real political. I guess some things that kind of came to mind are that there's been a 'us and them mentality' that exists out West. I don't mean to pick on the ranchers at all, but, you know specific examples, you read the same things that I do and hear the same things that I do. So, let's use Nevada as an example. There's been different things that have been going on for a number of years there because of the total amount of federal land that's out there. They want to take it all back, and have the state control it. Until you can change that kind of political mind set at the highest levels of the state, I don't think you're really gonna change things to the positive for doing this kind of stuff. This 'us and them mentality,' like I mentioned before, there are different kind of slogans out there. Cattle Free In 93, and there is another one that I can't come up with right now. There are a couple of slogans, and they're all anti-grazing on public lands. ***Those people that are making their livelihood by doing it feel threatened and, I think in a lot of cases, they're extremely paranoid of having…an agency, the Feds, the bad Fed guys telling them how they have to do things on their private land.*** (Cadre – 1) **T8-12**

His [one landowner] biggest deal is that the agency doesn't communicate with me, everything they say I can't spell, and historically as an agency over time there has been a deterioration of some of my prior autonomy. You're taking away some of those things over time, and rightfully so in a lot of cases, but he continues to think that's always going to have to be the trend. So, the cooperation stance is something he just doesn't trust…***And I don't know if you're form the west or not, but it's built in. It's built in. The image of the land management agencies around here is not very strong.*** It's far less than what they deserve, they deserve a lot more. But, the prejudice is so bad, and it basically goes back to that trust, cooperation and attitude. (Cadre – 3) **T8-13**

We [NRCS] have not had, and probably its because we provide more of a service than having to regulate, we have not had the contentious issues with that [landowner cooperation] like let's say the Forest Service and BLM are having. (Riparian Coordinator – 2) **T8-14**

The NRCS…they're not, I want to say a regulatory agency. They don't have to implement and actually work with people in an adversarial type environment. It's a different group, it's different. (Cadre – 4) **T8-15**

Because maybe the agency did that in a few cases [excluded livestock from riparian areas, or kicked permittees off allotments] the livestock producers felt threatened….They felt threatened…like, 'this is the first foot in the door to kick me off my allotment' or something. (D.C. Official – 3) **T8-16**

In general, some of my experience has shown me that the Forest Service and BLM people tend not to recognize landowners as competent scientists. Now it's happened in the past, it's not everywhere its not an across the board thing, but it has happened. In general, I would say that NRCS people don't do that because of the way we deal with our constituents - we rely on them. (Riparian Coordinator – 2) **T8-17**

The few [training session participants] that were from the USFS and BLM, a lot of them stopped themselves with the creator and the creation at the same time and they had a hard time as an agency to come down and meet the public**.** (Cadre – 3) **T8-18**

TABLE #9– INSITUTIONAL FACTORS (STRUCTURES) THAT INFLUENCE SUPPORT

The big picture is how people work within bureaucracies - how people think internally, and how we have to act in a bureaucratic framework….Let's just say certain elements in it [agency culture or bureaucratic framework or structure] have been a barrier to this. ***There is a resistance…because there's a certain value system that's hooked to the agency culture***…In the agency, there are many values that people have whether it's I want positions, I want control, or I want processes that focus on my particular preference of land use values. You have all those types of values…***[Since] the team operates within a bureaucracy…we are subject to that thinking because somebody, who is at a higher level than we are at, has to make a decision on how we are funded and how this whole work is gonna move forward. So, you see, that does come into play as a barrie***r…[But,] it's not just the accelerated cooperative approach that's running into those things as a barrier, any new paradigm evolving in an agency is going to run into those same barriers. (NRST – 1) **T9-1**

The reason we have a problem in the agency is that most of the leadership, folks in management positions, are ambitious and want to be promoted. You get promoted by not having any black marks. ***They [agencies] don't reward risk, but risk is the only thing that allows us to succeed.*** So, unless we create a culture to reward risk, we're probably going to be very slow and may actually create more problems. (Cadre – 1) **T9-2**

I think you can have internal structures that will foster more integration than other structures….I just know that there are things we can do with our with budget structure, with selection of people for leadership roles, and [with the] general design of our goals and mission in the bureaucracy that can foster a lot more integration. ***There are ways to address those internal barriers, and there are people working on it, it's just seems really slow sometimes…for something that is so obviously out of balance***… [The reason why change is so slow is] because it's huge bureaucracy, and these are big systems, long held systems [that are] big and complex. (NRST – 1) **T9-3**

TABLE #10– MISSIONS, POLICIES & PROGRAMS
Bureau of Land Management: ***The process (PFC) started there (BLM). I think there are some issues on BLM ground that are different from the Forest Service***. I mean, they've got some tough ground problems to manage. When I was telling you that it [PFC] doesn't work in forested ground – the BLM doesn't have a lot of forested ground, they've got the really dry, gnarley, 'bad-landy' stuff that's been hammered by livestock grazing and other activities for a long time. And their agency has committed their folks for doing PFC. (Cadre – 1) **T10-1** From the Forest Service standpoint, maybe [the reason] why the BLM embraced it [PFC is that they] have more range lands than what we on the national forest. ***It's probably easier for them to adopt that [PFC, riparian initiative] as a policy,*** as a whole, than it has for us in the Forest Service because of the diversity of uses of that we have in the riparian areas. (Riparian Coordinator – 1) **T10-2**
Forest Service: Well, PFC use…is pushed more by the BLM than by the Forest Service. In the Forest Service, it's [considered] a tool in the toolbox, [but] there are other tools that we have….A lot of [USFS] regions have already developed, they can do assessment analysis…they have their own tools and protocols in place. [There are] hundreds of things out there for people to use. For us [USFS] to stick to one generic [tool], it's very difficult to decide anymore…PFC has its place, [as a] methodology for some field assessments, [and as an] education tool, but by focusing on PFC and forcing people to use it we may lose people because we [USFS] do have other processes in place. You see that here on our forest, they feel it's a step backward…***Selling PFC as THE tool turns off a lot of people, especially the technical specialists in the agency [USFS] because they've gone beyond that.*** (Riparian Coordinator – 1) **T10-3** Yeah, they only consider BLM having very few scientists... You know, we don't have the same mission they have. (D.C. Official – 1) **T10-4** Part of that, I think, comes from the Forest Service attitude that they need to create their own things. You know, 'We know best, so we'll create it.' (D.C. Official – 2) **T10-5** One of the criticisms I've heard of it [PFC] is that it was developed by the BLM. (NRST – 1) **T10-6** I think, historically, the Forest Service because of their – it's always been a much larger agency, the tendency has been that the BLM will adopt Forest Service methodologies and it's harder for them to maybe go the other way. (Cadre – 2) **T10-7** [In the Forest Service], we do have some other tools and processes and analysis available to us that we use…. [Forest Service employees] have begun more work on riparian assessment and have gone beyond a PFC, type of assessment – a rapid assessment. We've gone beyond that and gathered information, for the forest to use that's not only more detailed, more quantifiable type of assessments, but also training tools. ***So, I think that the folks in this region kind of view PFC as a step backwards in some respects. …They have more quantified information [e.g., evaluations of riparian habitats and riparian conditions] on which to make decisions than just PFC alone…PFC is not as detailed and not as efficient as what they are doing in some of the forest planning, as well as watershed level planning and project implementation.*** (Riparian Coordinator – 1) **T10-8**

The [USFS] research group had problems with the fact that PFC is not a quantitative approach, it's qualitative, and they much more like the more rigorous quantitative approaches. (D.C. Official – 2) **T10-9**

I seriously think that it [PFC] doesn't work real well, at least in our [specific area in Colorado] forested communities. Our riparian zones are so small, and the vegetation that we have there is predominantly conifers …In the higher order streams, we have a lot of rock that stabilizes things. [Finally,] we haven't really logged down to the stream edge like you have in some parts of the country. (Cadre – 1) **T10-10**

I think it [PFC and riparian initiative] definitely needs to be better integrated with kind of a larger context of managing resource conditions. …And again, it's not viewing riparian areas by themselves but in the larger context of, you know, land health or resource condition or the whole idea of landscape management. From a biological standpoint, it [PFC and the riparian initiative] still needs to be better integrated with other programs. A number of species that we're currently facing for candidates or proposed for listing status, are wide ranging species, and dealing with them one plan at a time or one watershed at a time is not getting us where we need to be. If you look at the recent listings of salmon and steelhead, you can't deal with them drainage by drainage, you've got to look at the bigger picture for them. So, trying to figure out how PFC or riparian management fits within a larger context, you know, within the watershed and within a sub-basin. I think it's important for us not to just, you know, focus on this little strip. Not that that's not an important piece of the landscape but it's still not well connected to the rest of our management activities. (D.C. Official – 2) **T10-11**

The fisheries biologists have been somewhat of a pain. One of the reasons that that some fisheries district biologists don't like PFC is because it doesn't include enough biological information. (Cadre – 1) **T10-12**

[Q]uite frankly, PFC has its limitations. BLM almost embraces it too much in thinking that that's the only thing we need to do for screening riparian conditions. And, in fact, it gets you up to a starting point, but ***from a biological standpoint streams that are at PFC may or may not be producing the habitat condition that you want for both fish and wildlife species***...(D.C. Official – 2) **T10-13**

[A] lot of the team's focus has been trying to design livestock grazing systems that are compatible with riparian management. I'm, quite frankly, much more concerned with increases in OHV use and a whole lot of other kinds of recreation activities. I don't know what the team has done working with the recreation groups, for example. Again, ***not that grazing isn't important, but where I see the real growth coming in uses on public land is in the whole recreation arena.*** And as an agency, we haven't really begun to deal with [that]. We're still doing, you know, recreation development in riparian areas. People like to be near water. ***For the longer term it [PFC and riparian initiative] needs to go beyond where the focus is now, which is primarily livestock grazing impacts on riparian areas, and look at larger landscapes and look at other uses***…(D.C. Official – 2) **T10-14**

I guess in the past it's been probably more closely tied to grazing… Most of the PFC training is done on active allotments or range lands, and they looking at the effects of grazing. [But there are] other impacts [that we need to look at]. ***When I talk about national [priorities] prescribed fires is #1. You know, I talk about buzz words and it's right there at the top - what are the impacts [of fires] to riparian areas***…. So, it's kind of twisted the need to focus on riparian in different areas. (Riparian Coordinator – 1) **T10-15**

Natural Resource Conservation Service:

Our history is that there was a soil conservation district formed. Because they [landowners] have a conservation problem, they went to the Feds and said, 'We need help.' And so the SCS [Soil Conservation Service] was started to provide that type of technical assistance so private landowners could apply conservation. ***So I guess it goes back to the root of our agency, which is to provide technical assistance but not regulatory management***. (Riparian Coordinator – 2) **T10-16**

Well, we [NRCS] have a different responsibility, I think, than the Forest Service in that we don't manage land – number one. ***Ours is more of a voluntary technical assistance type of deal.*** (D.C. Official – 3) **T10-17**

NRCS is not a land management agency, it's a cooperation agency. It works through other landowners to accomplish it's mission. ***Because of that they probably don't feel the same level of freedom that we have within the national forests or within the BLM to say, 'This is the way we're going to do it.'*** We have the authority to say, 'yeah, this is what we're going to do on the national forest, or this is what we're going to do on the Bureau of Land Management lands. NRCS can't quite do that. They have to say, 'well, we can encourage, we can support, we can try to help people see the wisdom of moving this way, but we can't as emphatically say this is the way it's going to be.' And I think that's a more difficult difference for NRCS to come to grips with than we maybe give them credit for. (D.C. Official – 4) **T10-18**

Since we don't manage lands, we can't regulate to someone that they have to do something***. So ours is a marketing process***. Even though we're Federal, we're more like a consultant. So it becomes a [situation where] we have to sell it to them and then if they buy it, we can help them seal the deal…***So that creates a little bit of a different perspective on how much we want to tag ourselves with a procedure… [Additionally,] the NRCS tries to follow the middle road and [function as a] mediator rather than be aligned with the BLM, or the Forest Service, or anybody in particular.*** We try to pick the middle road and more times than not, we'll land on the side that the landowner's standing on…. ***Otherwise, it could slam the door on our constituency…***We need to be able to help them conserve the land, or fix it, or whatever is necessary to help the natural resources on the ground without alienating them [landowners] because if we don't we get nothing back. (D.C. Official – 3) **T10-19**

Well, their [NRCS] clients are private landowners and they [NRCS] do appear to be reluctant to promote a particular way of doing things. They more try and act as if they're providing a service to private landowners. So if a landowner asks for some help in a particular area, they try and provide assistance. But there seem to be…or at least the approach from here that I get from the folks I get here has been reluctant to advocate a particular kind of technique. (D.C. Official – 2) **T10-20**

This [riparian initiative] was an agency driven initiative and…one of the problems we had is we're a different agency than either the Forest Service or BLM or Fish & Wildlife. We have to be given an invitation to go on a piece of property. And if we don't get that invitation, we're not going out there. …If we don't get the invitation we're not going out there. On top of that, if we don't maintain the trust of an individual we're assisting, by that I mean if they can't be sure that whatever we find out there won't be used against them, we may not ever be allowed to go not only back to their farm or ranch and we may not go back to the surrounding farms or ranches. So that misunderstanding of how business is conducted among one land management agency versus a voluntary technical assistance agency that's out there to work to help educate and give people a better understanding and find ways to meet their objectives within their resource capabilities that's both economical and environmentally sensitive is…those are two different types of management ethics, I guess, or management styles. So it's difficult for us to really be a total player in some of the things that we're are for that. (D.C. Official – 3) **T10-21**

Within the agency we have some different, I guess, planning criteria and this [PFC] can meet a portion of it, maybe not all. So that was some of our concerns with this at the onset. (D.C. Official – 3) **T10-22**

We've not yet gotten anything scientifically quantifiable that says this [a certain riparian condition] is good, bad or indifferent. We have indicators, PFC is an indicator in my mind. But, in all the process doesn't tell you where you're at…. What PFC did bring though and what the strategy did was it helped, I guess, at least for [the NRCS], I think it helped us bring a greater understanding of issues addressing riparian areas around the countryside. …So, I mean, I think it was a great value for us to be a participant in this but I guess the limitation is I don't think we took the next step…. It's educated people so that we can start to move forward, on to the next phase, what I think is the next phase, the needed phase, we need to be able to get some certainty…***I personally feel that ecological sites or some type of correlated description among the agencies could do more to truly understand what's going on across the landscape and allow us to evaluate the option and predict the outcomes of various management techniques on the landscape than anything else that we have, the capability to do today***….[I]nstead of having a team of five people that are supposedly experts at the local level that define what this site should be, that you have a site description that says what options it can be based on the management of that site rather than it's current condition. (D.C. Official – 3) **T10-23**

[T]here are different planning processes and, you know, we look probably…although we recognize the value of riparian areas as very valuable, it is not…I don't want to say it's not key but if you don't do a plan with the landowner looking at all their resources and then address all the concerns they maybe have, you may really lose some opportunities to develop, you know, a comprehensive plan that addresses all the issues. ***And, again, I think maybe we've gone too far to looking at just the riparian area as the key indicator to which we're making decisions. We need to look more broadly across the landscape.*** (D.C. Official – 3) **T10-24**

Our [Utah NRCS] process takes us beyond just evaluating streams, we want to go into planning, you know….And so, that's were the S.V.A.P [Stream Visual Assessment Protocol] goes a little farther than PFC does. They are both very similar in their initial evaluation of the stream corridor itself, in that you get everybody involved walking the stream banks and doing the assessment, but then S.V.A.P. takes that beyond into the planning process….I don't think that the methodology we use is an issue as much as getting past value judgments to talk about function….And so, ***I don't see that [it matters] whether I use Stream Assist, or S.V.A.P., or PFC, or CRM, as long as the end result is that the people agree on what the land should be.*** (Riparian Coordinator – 2) **T10-25**

TABLE #11– IMPORTANCE OF INSTITUTIONALIZATION IN AGENCIES CHARACTERIZED BY CONSTANT CHANGE

Employee Turnover at the Field Level:

I wish we could keep everybody, because you put this investment all these people who are doing really good jobs. Some of the people who are leaving are just plain retiring, but other people have moved just within their agency jobs…. I wish that when they moved, they could get the support within their new jobs to work with that old cadre***. I know of some people who have moved, and not rejoined the cadre - even though we've contacted them and said 'hey'. And they usually just say, well I'd like to but I kind of have to feel out my current position and see if I can get some kind of support. I don't really feel like I can ask for that right now.*** (NRST – 1) **T11-1**

I bailed out this year. See, I was scheduled to be involved in two different [PFC training] sessions but this spring I ended up accepting a detail. I told the cadre coordinator, 'I can't do it' [teach the sessions]. ***You know, personally I can't go to a new job…where they're expecting em to do something and say, 'By the way, I'm already committed to do two of these PFC sessions.'*** (Cadre – 1) **T11-2**

It [participation as Utah cadre coordinator] was a natural step. I found it really easy to do [because] it fit in just perfect [with my other job responsibilities]...I had the luxury I guess, of having that as my job.... [Regarding my replacement,] my impression, and I in fact I think he told me that a couple times, that he wasn't able to devote the time to it [his role as the cadre]. (Cadre – 2) **T11-3**

My actual participation on the cadre has just been recent. Over the last maybe year and a half now, I [have] served as the coordinator for [the] Utah [cadre]. We transitioned out through [the original coordinator]. Then someone else picked it up, but he couldn't do it***. Then it took me a while to get the permission to do it here***. ...It really wasn't a struggle [because] I know my office management supports this effort from the PFC assessment methodology to the concept [of the riparian initiative].... So, it wasn't that kind of buy-in. ***It was more of [a problem because] I needed to still fulfill my duties, my regular duties and these [my coordinator responsibilities] were on the side or above and beyond.***..(Cadre – 3) **T11-4**

When we [Utah] first started as a cadre, I think we did a lot of really good stuff then…But, when the coordinator left it basically became non-functional. I suggested a new coordinator, and it became an internal fight at the state offices. [They said,] 'we don't want this girl, someone so low down on the totem pole, we want a state person.' But, the state person was doing haz-mat and all this other shit. ***Basically, it's totally falling apart now because the leadership didn't cut the new coordinator the time she needed.*** (Cadre – 4) **T11-5**

It [my responsibilities as cadre coordinator] dovetails pretty nicely [with my current job responsibilities], and theoretically that could change. It dovetails very nicely because my supervisor is very supportive of the whole riparian [thing]. ***I think it was made easier for me by the fact that my predecessor in this position was real actively involved with the national team and with forming the base cadre, so that when I came on board it had already been established kind of as a priority for the position.*** So, I didn't have to fight that battle…Functionally, the groundwork was in place so that I was able to just kind of start right in there and run with it. The supervisor support is key I think because it [coordinating the cadre] takes a lot of time. More time than I envisioned. (Cadre – 5) **T11-6**

National Political Changes:

Now, the trick is how do you catch those lightening bugs of brilliance and put them in a bottle? The putting them in a bottle, that worries me the most. When I left the Forest Service, Dombeck became chief of the Forest Service, so the contacts of that team [NRST] with the brass is still strong and I know that the support is still there***. But what happens with additional changes? It's not institutionalized. There are people that are of a more traditional bent in both agencies. I'm sure just as soon as that political support is not there, [those people] might want to return to former days of iron-clad lines of authority and very little flexibility.*** I hope that it is institutionalized enough that that won't happen. (D.C. Official – 1) **T11-7**

And, you know, at the ground level, I think it has been successful in a number of places but it is not well institutionalized, [which is needed] for programs to survive in our agencies… What happens once Wayne retires***? Because with players changing, if its not an integral part of both agencies [USFS and BLM], the likelihood of the team surviving is much less***…And, you know, [within] our management team, which will probably be all new [people] in a couple of months, a lot of people don't know what the team is all about,. ***You know, our leadership has changed a number of times since the team first started and there's probably less familiarity with the whole concept. Not that PFC is not known, but there are people in our front office who wouldn't know who Wayne is and what the team's all about. And [it is] the same on the Forest Service side.*** So, you know, there needs to be, again, for long term durability, there needs to be a broader understanding of not just what the team is doing but how it fits in the larger context of what both agencies are planning to do right now. So I think that's one of those keys for longevity, you know. (D.C. Official – 2) **T11-8**

At times, [my participation within the riparian network] has been a lower priority. Actually, most times it happens to be the lower priority because of the burned area emergency re-hab work, or the soils program work that I have to do . One area that I probably needed to increase some time on is coordination for the state cadres, and also networking with the riparian program managers. … ***I hate to say it but a lot of emphasis items come and go. And it's real tough to continue on with a particular one that started in '96, when now everyone is supposed to work on other national priorities or other items***…And that's one of the things that's happening with this program – it's taking less precedent, it doesn't have the momentum that it had in '96. …From a legal standpoint, we're not losing it [momentum]. I mean, endangered species, yeah, from a legal standpoint, no we're not losing momentum in that. But [regarding] internal momentum, I think we have. …'Riparian' is no longer the top buzzword. In the past couple years 'watersheds' has been the buzzword, and water quality. Riparian, again, was the buzzword five, six years ago. (Riparian Coordinator – 1) **T11-9**

Now, I do need to let you know that probably in the last two years, or the last three years, the emphasis on riparian as a focus in this region has been less….What I'm trying to say is that we don't preach riparian from the regional office like we used to five or six years ago....because we have other things that are biting us right now....For example, right now this region is very intensively involved with sensitive species, threatened and endangered species - as are a number of other places throughout the country… There's only so much time and so many dollars, so that's why the interest in riparian has declined.... ***[Historically,] I've had a fair bit of interaction with the national riparian team. Again, until recently, when we've had less communication, and I have missed the last one or two meetings. I'm not happy about that, it's just kind of the way the cookie crumbles***. (Riparian Coordinator – 2) **T11-10**

I think there's been a lessening of the degree of emphasis on riparian now....It doesn't seem to be on everybody's list right now… and I think it [interest] has to be re-generated. I don't know how to do that [because] I know they're [BLM employees] all involved in these permit renewals.... (Cadre – 2) **T11-11**

I'm not saying we haven't embraced that it's [riparian issues] important. We've embraced that its something we want to continue to work on and that we'll continue to do that. ***But, it's not the high profile, front burner, whatever choice of words you want to use to describe it that back in 1996 it was envisioned to be…***I think we have to get to the level of enthusiasm and commitment that we had in early in 1996, and we're not there right now. (D.C. Official – 3) **T11-12**

TABLE #12 – ABSENCE OF INSTITUTIONALIZATION

Proper Functioning Condition:

There's been another hang up too, and that is [the fact that the] proper functioning condition assessment is institutionalized in the BLM - it has dollars and targets assigned to it***. In the Forest Service, the chief put out a letter saying it will be the minimum method in the forest service, but there hasn't been any follow up on how to get that institutionalized.*** So, it was sort of the mandate approach - but it had absolutely no follow up....[Since]it was something they had to do, a requirement, ***people at certain field units were not committed to it and so they put it off or they got it done inappropriately***…and didn't have valid results. (NRST – 1) **T12-1**

I guess it has not been totally successful in becoming well integrated in the Forest Service way of doing business. (D.C. Official – 1) **T12-2**

We talked about it earlier, but I guess [one of the factors that would facilitate success would be to] to get the Forest Service on board more than it is. You know, that makes my job easier – to really have this emphasis from on high. And, I'll use money as an example because it's really easy if something comes down in a budget line item [in regard to] doing PFC or riparian health evaluation [because] you can actually see the money that goes with the package and do something. That's the ideal [but] I doubt that's going to happen. ***That's the main barrier with the Forest Service is that there's some of us out here doing it but our leadership hasn't really stressed it.*** Until that whole thing happens, I don't think the Forest Service is going to be doing much more [in terms of doing PFC assessments on the ground] and we might even be losing ground. (Cadre – 1) **T12-3**

The biggest thing [reason for not using PFC that] I've heard is, '***We don't have time to get the professional specialists on a forest to go out and do this kind of thing together.' They're not funded for it, they don't have enough budget to do it.*** That's the biggest one that I know. Or, that the people who want to do it don't feel like they're given the support, which I guess comes from the budget [too]. (NRST – 2) **T12-4**

When you're together with the National Team, they stand pretty firm in saying, 'These are journey level people and these are the folks you want out on the ground doing the PFC.' This is like true confessions, but I've told people this before so it's not really a secret. When I look at myself, I'm on the state cadre, I've been doing this work… So, if you take one hydrologists from this forest that is supposed to go do PFC, that's me. But I don't do it….Even the people that work for me that have been trained in PFC, they only do it on certain reaches….On certain allotments that may be a little bit more controversial, they'll actually do it…[The way] I have always operated in the past, and I talked about it earlier, [is that] I would actually put on my own PFC training session for the summer seasonals…We trained then up and [said], 'O.K., you're now the PFC experts and you're the ones that are out there working all summer to get this [PFC ratings].' If there was any rating that was less than PFC, then we went back as the journey level people and looked at it to see – were they right, or were they wrong? …I know the BLM does it differently [but that's] because…the BLM is really committed, and they started it, it's their process…and their agency has committed their folks for doing PFC. (Cadre – 1) **T12-5**

I think it's a lack of leadership, and it's easy to kind of point fingers on high, but we're a bureaucratic organization. So, if somebody, like the chief, would come out and say, 'PFC is really important and I support people at the ground level being involved in PFC,' and that's more than just a signature on a letter, the regional foresters will pick up on that, and the directors in the regional office, the forest supervisors, and then it would you come down and it would be part of your workload and what's being expected of you. There really hasn't been that. (Cadre – 1) **T12-6**

If you're going to make those mandates [like the USFS mandating the use of PFC], you have to provide the people and the resources to actually get it done – and keep those people and resources dedicated to that effort. (Cadre – 2) **T12-7**

Network Participation:

With the state cadres, we have every level of I guess operational effectiveness you could call it. [Part of the reason is personalities, another factor is] the fact that they have not really had the agency support that's necessary to do this work. (NRST – 1) **T12-8**

One of the biggest things that we have that's lacking, according to the cadres, is that there is a concern because they're not mentioned, their work in the national effort is not mentioned in annual work plans and things like that. ***There isn't support at the top, and it isn't really institutionalized in all of the agencies.*** In the BLM it's supported, but it's not really touted by the Director… That's not to bad mouth him, because he really does support us 100%. Dombeck [USFS Chief] is the same way, he really supports us. But there's a lot of people within the forest service hierarchy that really, that just as soon we'd go away…. So, I think it needs to be institutionalized and supported from the top down, more than what it is…. I've already asked Mike to come and talk at our workshop we're gonna have this year in January***… because there's a lot of forest service people that need to hear him say he's behind this…. We're at a point now where the people are saying, 'Do they care out there, because we never hear anything about us and all the work we're doing?' …And I think that if they would just give, just designate some money to go to the state cadres than there would be a bigger feeling of, 'They really know we're here….*** They really care.'… [Because] the one [complaint] that I've gotten from every group [cadre] that I've gone and worked with has bee, 'We're still working on a shoe string. We're not getting any funding from the national level to support it. We're taking it out of our training budgets.' You know, they're just doing it [PFC training sessions] on the side any way they can. (NRST – 2) **T12-9**

I guess I'd like to see on the state cadre, greater recognition of this as being the training as being an important part of the job. You know, of the many hats that so many people in the field office [wear], the many responsibilities they have, this [participation on the cadre] is also [another one] (D.C. Official – 2). **T12-10**

I don't know how to be more of a force in budget for the agencies….I don't want to [have to] say to the regional forest supervisor, 'You need to train X number of people and you need to set aside a budget for training your personnel,' and then same with the Bureau. …That would go over like a lead balloon… (Cadre – 3) **T12-11**

I think there's a money problem. When you boil it down, there's no money. I see under the current administration, there won't be any money in the foreseeable future. …***You know, and it's like Forest and Sandy, I mean those guys, are two of the greatest cadre members in the world.*** [At one point] they had the money back then to fly down here and work with the Colorado cadre, and I learned so much from them that it's just amazing. I've only wonderful things to say about those two people, ***but their funding was cut.*** (Cadre – 4) **T12-12**

When I go off to the training sessions in the summer, the BLM pays my travel and they pay my per diem….Some of the other cadre members have to kinda fight funding. [For instance,] some Forest Service guys have to fight [for it] because their supervisors argue, 'well, you work for the Arapaho National Forest and you're going to teach a training course in Durango – how the hell does that benefit our forest?' Fortunately, we haven't had too much trouble with that because we try to get some funding out of the regional Forest Service office to cover the cadre so people on individual forests don't have to fight that battle with their supervisor about how this benefits their forest when the training is well away from the Arapaho National Forest. (Cadre – 2) **T12-13**

TABLE #13 – NATURE OF INSTITUTIONALIZATION

Bureau of Land Management:

The BLM's turned PFC into a widget… a unit of accomplishment.... BLM's turned it into widget, now that's totally contrary to the intent of accelerating cooperative riparian management. (Cadre – 1) **T13-1**

For the agencies, it's [PFC] absolutely not been too cooperative....I think we're having the same conversation, ***but we're not having results within the agency because of everybody is competing for the same dollar.*** That's the problem….So it gets economic real fast. (Cadre –1) **T13-2**

Because once BLM created a widget, and because of our grazing regulations if there's a failure to meet a standard in which riparian is standard too, the BLM, in the state of Utah, has to take action prior to the next grazing season. So, you know, that totally defeats cooperative riparian management and working together….Because they're [permittees] getting beat over the head [with PFC]. Their permits with the Bureau are at risk. The Utah BLM is going to court…in regards to their grazing programs…And I'm sure the same will be true for the Forest Service grazing permittees….The BLM says riparian areas will be in proper functioning condition, that's the minimum. So, anything else below that doesn't matter because we've turned it into a widget (Cadre – 1) **T13-3**

The biggest concern people have is not the way it's [PFC] written, but how it is applied…If it [PFC] is done by the most experienced people it'll work, but that doesn't happen…And it's supposed to be done by a team, but that doesn't happen…The Dream Team said that they would reject any one's PFC analysis that was not done by a team. So, I went to the person here in Utah and told her that….She came back and said, 'fine turn me in, and tell the Dream Team to get their asses down here to help me.' And I said, 'well, you didn't have a team assigned.' And she said, 'yes I did, but they're all experienced people which means they have other jobs. I was given this responsibility. My supervisor said this number of miles has to be done. And the other people, because they also had their own jobs said, 'I don't have time for this, I have to get mine done.' And she goes, 'I'm a second priority to them because they're senior level people too. ***I was told this has to be done. So, I had to go do it on my own or else it wouldn't have been done because my team couldn't show up.***'…So, what we're doing is one or sometimes two people [complete the PFC assessment]. Most of the time it's not even a person like the woman I was referring to, what we're getting is summer employees….Even, worse, we're getting people who aren't trained [conducting PFC assessments]…or who are dry-labbing just to meet quotas. (Cadre – 2) **T13-4**

Well, I wouldn't institutionalize the process. I'd only institutionalize the objectives and goals. In fact, that's the one thing, if it meant if that's what institutionalizing ended up being, then I wouldn't want I, because we'd be a failure then. The states would not have the flexibility anymore to work within their own little communities and within their own specific and unique groups that they have. And they all have them, everybody is is different, and you can talk to somebody right here about keeping water on the land longer and they're estatic. You go to North Dakota and talk about keeping water on the land longer, and they'll string you up from the nearest tree. (laugh) That's their biggest problem is too much water, their fields are all flooded. …***All I want as far as institutionalizing … is a recognition that PFC is a viable process to use. And the second thing would be that the National Riparian Service Team is out there to help you solve problems. That's the only thing that I want. And that there's a budget for doing that. Other than that, I don't want anything else.*** (NRST – 1) **T13-5**

You also have to build in flexibility to do some other things within those programs or within that agency. (NRST – 2) **T13-6**

The other barrier is the way our budget is structured. Agencies are trying to improve that right now, but it's always been very functional [compartmentalized]....***When we're talking about producing values off a landscape it takes, and watershed processes, it's a totally integrated effort....[but the budget is] very compartmentalized, very functional.*** And, of course, you've got all of the human characteristics that go along with that such as turf, power, control...See, all of that plays in as a barrier to integration....If there were a very integrated budget structure, there would be less opportunity for the turf battles and the control concerns....[But, the way it is now] there is still a certain amount of functionalism built into that structure. You know people are still figuring out how to keep their own thing, their own chunk, their own department, their turf. (NRST – 3) **T13-7**

That's a whole…don't get me off on GPRA [Government Performance Results Act]. Somebody last week asked me if I knew what GPRA was and I said, "God please repeal this act." There's nothing wrong with GPRA in and of itself. I think the issue is the fact that - I just raised it in another meeting. Someone said well, the state directors are interested in this and I said do they get measured on it? How do we measure? ***And if they're not getting measured on it, they can be interested and it's not going to get done. And so I think that's the continuing challenge is how do we identify the way to measure it - so it's meaningful.*** (D.C. Official – 1) **T13-8**

[T]he focus should be on what we are actually doing to improve riparian conditions. PFC is just a tool to that end….[***Historically,] there has been a lot of identification of the team with PFC and less with actual on the ground changes promoting what is actually happening as far as changes on the ground. I*** think it would be a lot more useful at this point than [looking at] how many miles of stream are in what particular condition…We know things are bad, what have we done to change it? It would be interesting to see over the last six years that the team has existed, how much change in condition has occurred as a result of the team - rather than just keep counting miles, inventory. (D.C. Official – 2) **T13-9**

I think it also has to be feedback from different communities, whether it be livestock producers, individual permittees, environmental and conservation groups - those folks that have an interest in riparian zones and the aquatic habitat that goes along with riparian. How do you measure it? Well, some of it might be [through] doing interviews and coming up with a more standardized way of evaluating customer service, satisfaction, awareness, those kinds of things. (D.C. Official – 3) **T13-10**

[It is also important] to look at whether people are conversing in riparian values, how to achieve those values, and the benefits of cooperation. (Cadre – 3) **T13-11**

I have mixed feelings about creating a metric that now needs to be counted, how many miles of stream are in proper functioning condition and that type of thing. Rather than focusing on the big picture of restoring riparian areas and fixing streams and that type of thing it has become, at least in some places, this focus on just counting and making sure you got the right number of miles and streams and meeting targets and that type of thing. That's unfortunate from that standpoint, but on the other hand you need something that's countable in order to market what you do. What a powerful tool to be able to say in 1997 we had this many miles of streams like this and in 1999 – here's the trend. It's a powerful tool to have, so I'm not overly upset about the fact that there's this device for measurement because I think it's important. [The problem is] we're just too impatient with our measuring devices when it comes to restoring riparian areas. ***We want to be able to say, 'this is what we did this year and here's what happened this year.' Well, stuff that we do this year is probably going to pay dividends in 10 years.*** And finding a way to articulate that is probably something that we need to focus on and describe….[Furthermore, we need to look at] not only whether the steam is in better shape or has the potential to be in better shape because of the work that's been done, but whether the people have established a longer term positive working relationship, more of a collaborative approach to managing the riparian areas. (D.C. Official – 4) **T13-12**

TABLE #14– HIERARCHICAL SYSTEM OF AUTHORITY AND DECISION-MAKING
Nature of decision making in centralized vs. decentralized organizations: ***And so we said o.k., we're going to make this happen, and sometimes in life, being the chief of the Forest Service and the director of BLM, we can just simply say 'make it so', and people will do it, no matter how grudgingly.*** So, Elmore was given the authority to start looking for the right people that he wanted to recruit for his team and [told] that we would make it possible if they wanted to do it. (D.C. Official – 1) **T14-1** ***[Within] the NRCS, the rule doesn't flow from top to bottom as hard as it does inside the land management agencies….***The NRCS doesn't do a national [statement saying], 'This is the way it is.' …Our people are more independent I guess you'd say…They [W.O. officials] pretty much let the states pick their own [protocols]…They have national standards for practices…[but] generally it's a state by state [decision]…It might get to smaller zones than that if the areas are strong. …There are some things that are pretty standard across the NRCS, but the riparian thing…there is enough variability in streams from east to west and north to south and whatnot that as long as we're all talking [about] the same thing when we get to the end of the line, nobody cares how you got what you got….It's all the same data, it's just coming out of the end of the pipe a different way. (Riparian Coordinator – 1) **T14-2** I have heard that from them that the state conservationists [rather than just top-level employees] have authority [within the NRCS].... The way they're structured is that they work with local and resource conservation districts and state associations of resource conservation districts to tailor the services they deliver based on the local issues. (D.C. Official – 2) **T14-3**
Importance of support at all levels (top, middle management, and field): ***There are a lot of grassroots efforts out there that stay localized because they don't have the attention, but when you can get the support, timing is perfect, and bring it all together [it's best to do that].*** [Some people get kind of] irked [by the fact that Wayne knew the chief and director, but] when I think of top down I think of somebody saying by God, this is what you're going to do and how you're going to do it and it will work. And it's never been that. What they've had was support. (D.C. Official – 3) **T14-4** To keep the team going as a national interagency team [it was important that] people [could] look at it and see that there was some commitment by all the agencies at a higher level, at the national level, that was probably one of the biggest advantages. (Riparian Coordinator – 2) **T14-5** There was a lot of corporation, particularly at the administrative level, but when you get down into the, some of the Forest Service districts, there was not a whole lot of buy in. (Cadre – 1) **T14-6** ***I feel like it [use of PFC] was a top-down [decision] in the Forest Service***…[that came about] more because of the relationship between Wayne and Jack at the time…***Let me give you an example, I was on a forest at the time and we heard a rumor that Proper Functioning Condition was going to be mandated to us and that it was something that was made up by the BLM.*** .Jack eventually signed a memo to the Forest Service that we were going to use PFC as the minimum assessment method. (NRST – 1) **T14-7**

I have a problem with anything that comes from the top down. I see the same thing happen with the EPA a lot. We just recently started a new initiative for doing the wetland biomonitoring. Of course there's no money for this new program, but it's a new thing that they're gonna push. So I get this draft document [regarding] how this whole thing's gonna work and it says, 'Headquarters is gonna do this, and headquarters is gonna do that, and headquarters is gonna do this.' But they want states to develop monitoring assessment methods and programs. So I got that and I said, 'You know, a lot of states and people in the states and other places have been working on these same questions for years. [They've been] beating their heads against walls trying to figure out how to assess these different kinds of things, what works, what doesn't, what kinds of things you measure and what won't tell you anything. So, don't you think it would be smart to maybe gear it to them and what they've found, rather than saying headquarters is going to tell you how to do this?'…***[It's the same problem with PFC] because it's being imposed kind of from the top down, and it's not taking into consideration things like the Montana stuff that's already been done and the things in Utah that have been done.*** (Cadre – 2) **T14-8**

The National Riparian Service Team is so much more than the use of a tool like the Proper Functioning Condition, and I would have found a way to more clearly articulate what the NRST is about without so much reliance on PFC as the tool that its going to use in order to accomplish it. ***Very specifically, one of the things that I regret having been done in the past was sending out this national direction that said PFC is the minimum tool and tying it so closely to the Riparian Service Team. That was not embraced across the board in the Forest Service, and as such it has been resisted in some quarters within the Forest Service. Because of that the Riparian Service Team has been, unfortunately, resisted for some of the same*** [reasons]. (D.C. Official – 4) **T14-9**

Long before this [the creation of the riparian initiative in 1996], the BLM had been using it [PFC] all over. (NRST – 1) **T14-10**

Probably one additional one [barrier] is just the resistance from line managers in various agencies. If they don't accept the concept, it's not likely to be successful in your area. So one of the areas that probably could use some additional work is with various managers. Wayne has worked primarily, and the team has worked primarily with…field people, specialists in particular. Even within the agencies, he worked primarily with riparian specialists and not as much with management teams. (D.C. Official – 5) **T14-11**

It was a combination of both [top-down and bottom-up decision-making], because there was a lot of support at the ground level to do this work. We had already come in contact with so many people in teaching the sessions and there was a pretty much an overwhelming response that 'Gee this makes a lot of sense. We need this to make a difference on the land.' ***At the same time, we were experiencing a lot of blockage at some of the mid levels of the agencies…which has been a major barrier…because [these] are individuals that can empower and enable folks at the ground level to actually implement this process and work together as teams, and actually do the collaborative work on the ground.*** At that point then, the top down approach was put into place really. The chief of the Forest Service and the director of the BLM communicated with the chief of the NRCS who said, 'You can't do this without us it's gonna be in partnership with us, even though I'm not a signature on the letter.' So, that's what we did, it was a bottom up and a top down to try to influence that very wide mid range within the agency structure to get this effort going forward. (NRST – 2) **T14-12**

The Washington office riparian coordinator for BLM, forest service and NRCS have been supportive to a certain degree, but not near enough to um to really let people throughout all the organizational levels knows that the accelerated cooperative approach is in existence [and that] it is an officially sanctioned approach - it's just one of the many ways that as agencies we're getting the job of riparian improvement done and setting the context for this approach in relation to all the regular program work that's going on. So that has not worked well at all. ***That lack of support and vision from the Washington D.C. level has been a barrier because it's not helping bring all that middle management level that affects the participation at the ground level, it's not helped strengthen that at all.*** (NRST – 2) **T14-13**

Agency values linked to hierarchical structure:

And he, when I talked to him on the phone the other day he said ah everything going ok. And I try not to talk business straight across with him, because, I had that same problem with Jack too, it's that it's real easy when you're friends with somebody to bring in things that your bosses, ***if they find out that you've been talking to the chief or the director, and you've gone around them. Then you get a reputation of you know, that's not good.*** (NRST – 3) **T14-14**

As far as I know, it's [the riparian initiative] been very successful. It would even more successful, I think, if there was not continuing internal resistance…. ***I can't speak for BLM, but it was not particularly wildly accepted inside of the Forest Service, at least at the Washington office level, because I think people were just too hung up on ah chains of command, lines of authority***, and doing something like that, that had never been done before seemed to be a hell of a mind stretch. (D.C. Official – 1) **T14-15**

TABLE #15 – AGENCY WORKFORCE

Concerns with downsizing:

Oh, I think one of the reasons is every discipline is really under pressure with, in the downsizing mode, people are focused in on keeping their jobs or worrying about the future. (NRST – 1) **T15-1**

I know they're all involved in these permit renewals, but the number range cons keeps going down. You know, you've got one range con for the district now - maybe only one full time. How in the hell do you do that? And if they were to monitor? (Cadre – 1) **T15-2**

The feeling that I'm getting from the other cadre members is that we are, in Utah, we are barely making our minimum workload for the agencies. For the most part, the cadre are agency people…And I think that's, our biggest problem - the workload....***We want to go out and do this, but the Forest Service members are involved with plan amendments, which is a huge thing. [As far as the] BLM, part of what prohibited my activity this last summer was [the fact that] we're in the process of renewing grazing permits,*** which is a huge thing that's happening Bureau-wide. And it's not gonna get any better. It's just not working, we're [the Utah cadre] too small, and the present core members can't get a break. (Cadre – 2) **T15-3**

Take the whole activity of monitoring. ***There aren't enough people in the federal government to monitor what needs to be monitored,*** that's why watershed councils are starting to do that. (NRST – 1) **T15-4**

Just one point that I didn't bring out quite as much is that within the agencies right now people's time is spent bogged down in processes that are mandatory processes like NEPA and consultation. Yet, there's really some opportunity to change how we do those two functions to free up people's time, to build the relationships and get in the field. ... People in the agencies used to spend a lot more time out on the ground. They used to spend a lot more time with other people outside the agencies. (NRST – 1) **T15-5**

Limited number of available experienced, specialists to do PFC:

Because the agency…particularly high level agency folks…are driving for a generalist, we're reducing the technical competency of the junior folks coming in….We want to create generalists, people who'll do everything. But when I look at the people who are hired, they're hired by the guy on the ground who says, 'I need someone to do this, [collect this] specific, technical piece of information.' (Cadre – 3) **T15-6**

But the other thing that that our riparian and watershed focus has done is it's brought out very clearly the fact that the agencies do not have enough people in the physical sciences to fulfill this [the riparian initiative] mission. ***We're focused now on the sustainability of watershed functional processes as a foundation for producing all the other values that come off the federal lands, and private lands for that matter, but within the agencies now there aren't enough geologists, hydrologists, geomorphologists, there's a terrible shortage of soil scientists***....You still have people that have more of a either a vegetation background whether it's forestry, range or botany. We also still have quite a few engineers, although they've downsized a certain amount. And then over the last ten to fifteen years we have had a lot of biologists....fisheries and wildlife biologists. But what is the foundation of all of that? ... The vegetation and all the species that live out on the landscape are dependent on that the very basics - soil and water .... [Overall,] the work force composition is out of balance with the fundamental mission right now. (NRST – 1) **T15-7**

They [BLM] had this hydrologist, a really good hydrologist, working on Southeastern Utah, and I worked a lot with him…When he left, I was kind of interested in that job so I kept asking them about it. Finally, they said, ***'We're not gonna fill the position. What we're gonna do is we just hired this woman who's a geologist, so we're gonna send her Rosgen's training and she's gonna be our hydrologist.***' Well, I mean, she might be good, but maybe she's not. And, how often is that happening? I know they had this other woman…who was a wildlife biologist, and she was out doing, riparian assessments and stuff. (Cadre – 4) **T15-8**

In the agency, senior people are so important that they sit at a desk and type on the computer – when the most important thing that person can do is actually have gone out and looked [at the condition on the ground]. That is an agency structural problem…That's a structure not in the [PFC] process, that's a structure in the agency. (Cadre – 3) **T15-9**

This answer is more from my experience with just with BLM. Back [where I used to work] when we did a lot of the initial assessments, the way it was done was myself and usually one seasonal would take an initial look at a large number of riparian areas or streams. The ones we felt were clearly properly functioning, we would just categorize them that way and move on. When there were questions, the functioning at risk ones, what we would try to do is set those aside and then revisit those with the interdisciplinary team. ***Because realistically, there was no way on earth that in the course of three years we could do every mile of every stream in a resource area with an interdisciplinary team, because other folks didn't have the time to commit to that.*** So, I think initially a lot of it was done with a non-interdisciplinary team to sort through the rough ranking. Then when questions arose, the interdisciplinary team was used to nail down that rating. (Cadre – 5) **T15-10**

If we [NRCS] send someone up to do riparian management, we give them a form and we train them how to use the forms and give us some subjective [rating]. We'll give them a range, say we want them to assess one thing, we give them a range of zero to five and say, 'Okay, you pick if this is good or bad, or you pick somewhere in between.' ***Whereas the USFS sends in, they don't have the time, they have a lot of seasonals, they don't have the time to train them real well. So they have to give them a more detailed form*** that says, 'If its this it's a 1 or 2, if its this it's a 3 or 4, if its this it's a five.' So they have to be more detailed just based on the type of folks they have to send out there. (Riparian Coordinator – 1) **T15-11**

Well, quality control problems is an opinion I've heard that finds fault with it. But, you know, it is true when you use quantitative methods, people with less experience can repeat it. Qualitative assessment requires a higher skill level to be repeatable. ***Frankly, that's probably why the Forest Service is using so many quantitative protocols - because they use a lot of summer temporary employees.*** (D.C. Official – 1) **T15-12**

I want to give you another example of a basic approach to something, and the difference between the NRCS and the Forest Service and BLM. Our [NRCS] people, we don't have the numbers first of all, and we don't keep all of the disciplines in all the offices. We have a lot of one and two, maybe up to three or four people offices. So, ***that person has to be pretty much a generalist to cover the bases.*** If they need a specialized type of help then they call either the areas office or maybe somebody on the state staff, or we may even go hire if we need somebody more specialized than that for certain disciplines. Even at this level [state office] we have a lot of multi-tasks that we are responsible for. Like, for instance, my primary focus is range management but I also deal with the riparian issues because in most cases you can't divorce the two of them. I'm also the forester and [I] deal with cultural resources. So we just don't have the staff or the personnel. So we train our people to see a broad perspective of things…. And so NRCS tends, …we don't [typically] send out big teams of people to go do things unless. (Riparian Coordinator – 1) **T15-13**

Skill base of agency employees on the riparian network and the objectives of riparian initiative:

What I would like to see is, instead of having specialists like myself trying to coordinate an education program to non-agency employees, maybe [we should] bring in environmental coordinators, or environmental teaching specialists, to put a program together that goes outside of the agencies. Maybe we no longer need a network, maybe the network is just there to support and to try to facilitate a location where these things happen….[Currently,] the network people are only focusing on PFC training with a few landowners who are specifically involved, they're not reaching out to a larger group of people, which is what needs to be done. ... I think [that is happening because] that is outside of our job skills ...Most of the people on the network are specialists in certain technical fields. They're not specialists in education. They're not specialists at teaching college students or high school students. It's not that they can't, but we may need to be a different group [of people] in the network. If we want to retain the network, let's get some of the people on there [the network] to meet the goals and objectives rather than just teaching PFC….[We need] a network that [is more] diverse…which would possibly leave out people like myself, [or other] specialists, because you're focused on a different group of folks, a different group of people. [So, we would] probably lose some of the specialist network, and begin to focus more on educators, on environmental coordinators, you know, those people who try and get a message across. [Then we could] target a different audience. Rather than targeting specialists in the field, [we could target] ranchers, local land mangers…[In summary,] ***we need a different group than we have now....[with] a different focus, new people, and different specialties. Not only people who are trying to teach an assessment process, or an assessment tool, we need to have a group of people who are educators, who teach concepts*** ... Maybe that's [the type of a network] what was supposed to be there originally, and maybe they just picked some of the wrong people. (Riparian Coordinator – 2) **T15-14**

I mean it was obviously something that we really needed was that specialty [social science/human dimensions]. This is off the subject, but I have been surprised at how many people have not been supportive of the NRST hiring a social scientist. But at the same time, [some of] the managers and the people at the top have been ecstatic. (NRST – 2) **T15-15**

We tend to talk the science because that's what the agency has done. But you can't separate it.... Keeping healthy riparian areas is critical to how a community functions. Whether it's aesthetics or water quality or fish or ranching, whatever it is, you need that. So I don't think you can pull it apart. (D.C. Official – 2) **T15-16**

TABLE #16 - OWNERSHIP IN DECISION TO PARTICIPATE

Lack of ownership constrains success.

"I think that might have been part of it, you know, why they didn't just put us [NRCS] on as a full partner to it [the initiative]….***Because we didn't buy off on it ourselves***." (Riparian Coordinator – 1) **TI6-1**

"Well, people, and this has happened in the BLM too, just didn't do it [PFC] properly. It was something they had to do. You know, it's a requirement. ***People at certain field units were not committed to it and so they put it off or they got it done inappropriately*** – that sort of thing…So that would probably be the biggest disadvantage. And it's just human nature. People in the Forest Service would do the same thing if it were a mandated process. Some areas would just be excellent at getting it done properly, others would not. And it always goes back to the individual in place that's making those decisions." (NRST – 1) **T16-2**

"I think what other people are trying to do is take the initiative beyond it's intended scope, and they try to use it as a hammer instead of a communication tool. And I think the service team recognizes that they're being asked to try and come in and be a hammer. And you're going to lose, you're going to lose ground as far as the positiveness of the concept if the service team comes in an starts being that third party reviewer of a dispute between a local field manager and interest groups – whether it be a production interest group or and environmental interest group. You're going to lose your credibility." (D.C. Official – 1) **T16-3**

Presence of ownership facilitates success.

"And the social side was getting people to understand the science, because the best science in the world is totally useless unless you do it. And so how do you get people to do it? You get them to do it by having them understand that there's something in it for them. ***And when they do that, that makes it their idea. When they, it comes into their head, 'Hey, you know I could do this on my ranch,' you know, that gives somebody ownership. Once you imbed ownership, then you've got commitment.*** And once you've got commitment, you've got a sustainability of the dignity of their lifestyle – it has not been eroded at all – and they'll work for you. And they'll do what is the right thing to do, and that's the approach I take." (NRST – 2) **T16-4**

"The team's approach …has been...bottom-up. It's been getting out, walking the ground, talking to people. ***What that does is not only solves the problem, but it gets ownership from a variety of people***. I think Wayne taught managers a lot. You know, we're kind of sitting back and we're watching this guy as he's talking to all these different folks and we're beginning to see that it works. ***And people have ownership. All of the sudden, we're making progress where we weren't making progress before***….And you give them [people] the skills and the training to continue that, so they don't have to call the team in to fix it. It's not a S.W.A.T. team, it's an empowering team." (D.C. Official – 2) **T16-5**

"I think taking a course in PFC was a real threshold for me. All of the sudden I became proud of a few things that I wasn't proud of. And the things that before, I mean on my own operation, I became aware of weak links that I wasn't even aware of. And so it was kind of an eye opener for me. I finally felt like I understood, and that's a great advantage because could affect some things positive or negative." (Cadre – 1) **T16-6**

TABLE #17 - VOLUNTARY DECISION-MAKING (ENCOURAGING OWNERSHIP)

"Part of this [dialogue within training sessions]...I imagine it gets dull in some states when all they've got is agency people showing up. ***And the agency person is required to be there. So he's going through the motions.*** What we've got here in Colorado is we've got these people that are coming [to the training sessions] that could be somewhere else." (Cadre – 1) **T17-1**

"***People are much more effective if they are working from their own convictions, rather than an edict or mandate***." (NRST – 1) **T17-2**

"I wish there was a way to do that [institutionalize], but I don't really know how to do it. I really don't, because the truth is [that] in some ways it's got to go exactly the way it's going. And people learn about it, and the ones who see a benefit use it. And I really don't think, even if every person from the Washington Office and every person from the Regional Office said, 'Yes, sign on. This is the most wonderful thing.' It still doesn't mean that people on the forests are going to embrace it. It's just got to come from inside of each person. I do wish that there was some way of getting it institutionalized, although I don't like that word. But, you know, getting it to where the right people were supporting it. [Then] other people would look and say, 'That's a good thing.' I wish there was a way to do that. But I know in my heart it's just got to come from people learning about it and knowing how they can use it to help their job. ***Because then it comes from the heart, you know, it doesn't come from being shoved onto anybody.***" (NRST – 1) **T17-3**

TABLE #18 - PERSONAL IMPORTANCE
High levels of personal importance - riparian management. "I guess the source of the initiative as I can see it would be Wayne Elmore. I think he's basically, ***he's got a passion for the resource*** and wants to find a way to address resource concerns in riparian areas and do it effectively." (D.C. Official – 1) **T18-1** "I don't know all of what went on, but I know there were conversations between Mike Dombeck and Jack Thomas that help craft the idea of doing this interagency team to help both agencies try and promote riparian management. ***And I think a lot of it came out of personal interest, Mike being a fisheries biologist by training and Jack being in forestry, but also a wildlife researcher.*** So, they both were interested in – and they both knew Wayne." (D.C. Official – 2) **T18-2** **Low levels of personal importance - riparian management.** [when asked why environmental groups are less likely to participate in initiative…] "***It's [riparian] really, it's not a resident environmental message in the sense that it doesn't hold a candle to the salmon crisis.*** You know, people don't see grazing as degrading as logging is, as clear-cutting. So riparian areas, I mean, if you take it – you go like clean water, global warming, clean air, logging, grazing, riparian [falls] way down at the end of grazing somewhere. So it just doesn't, ah, it's very specialized." (Cadre – 1) **T18-3**
High levels of personal importance - initiative advancement. "***And it [the initiative] was something that I believed real strongly in***, so I had the option to continue that level of involvement or even increase it or maybe say 'you know, I'm not really into this riparian training stuff' and I probably could have let it go." (Cadre – 2) **T18-4** **Low levels of personal importance - initiative advancement.** "Initially the chief [NRCS] was quite interested and had agreed to participate, and there were a couple of people in the Washington Office that were also interested. But, I guess, ***one of the stumbling blocks has been some of the people it [initiative implementation] was assigned directly to didn't have the same level of interest***, so it's been hard as personnel has changed." (D.C. Official – 2) **T18-5**

TABLE #19 – WILLINGNESS TO ENGAGE
IN COLLABORTIVE DECISION-MAKING

"I don't think there's tremendous disadvantage, other than ***it takes a tremendous amount of nurturing*** to bring people together, and organizing each other, and [deciding] what we're going to do. So, it can be cumbersome in developing something….***That's a disadvantage initially, but it's a benefit in the long run because then everybody's on the same page, talking about the same thing***…and so the disadvantage initially is probably one of the major advantages too." (Cadre – 1) **T19-1**

"A lot of the problem with the private ranchers…it's not because they're not interested but it's the time commitment [e.g., 3 day training sessions]." (Cadre – 2) **T19-2**

"Okay, there are a couple of things there [regarding limited participation by environmental groups]. One is that by and large, ***the environmental communities do not trust the agencies. Period. Secondarily, they see cooperation as, collaboration as, co-optation***." (Cadre – 3) **T19-3**

"PFC is a collaborative process…Now, the Southern Utah Wilderness Alliance is our group. They put in their newsletter that they refuse to participate in collaborative processes. …The Southern Utah Wilderness Alliance…and the environmental community was given a lot of privileges***….They may not win very many lawsuits, but because they stop the process and management for multiple years - by the time they lose often they've won the decision…No action is an action***. And often because the BLM works on a five year planning horizon, all the agencies do, it takes eight to ten years to get through a federal lawsuit because of your appeal process. …Five years later, you're in another planning process and you plan on doing this. When you're in lawsuits you don't plan on doing what you're in a lawsuit over. So, by the time they lose the lawsuit and say 'Okay, you go do this' it's not even on the planning schedule." (Cadre – 4) **T19-4**

Some people valued it, or called it a value conflict, but it's an interest, someone is just interested in - again, my opinion, off the record, is because there's a lawyer who works for the university, this is how he gets tenure - to sue for BLM, and then he writes to get articles and he gets to be famous and he's now tenured. ***He has no interest in resolving, or no interest in actually managing something appropriately.*** His interest is to remove livestock to be able to say, 'This is what I did.' His interest is to beat the BLM, to say, 'I've done this'. It doesn't matter to him what we come up with. ***What matters is, how do I keep it in court***, and how do I try and do this, because my interest is that I don't like livestock. And he's told me, 'I don't really care what your physiological responses to grazing animals are. I just don't want to see the plants grazed'. It doesn't matter the difference in land health, it doesn't matter that it has no effect." (Cadre – 4) **T19-5**

"My experience has been that when I go out with a rancher, I already know that he knows his cows and he knows his landscape better. But I know plants and I know [plant] communities and that sort of thing. I say, ***'Look, you know this side and I know this side. Let's put them together and build something out of it.' And so, but that's my personal way of doing it. And I know for a fact that some people aren't that way***." (Riparian Coordinator – 1) **T19-6**

"Nineteen years ago I heard the word riparian for the first time. The first time I heard it was from a land management agency person and I said, "Where did that word come from?" And later I found out…that he was struggling to figure out what the thing meant himself. ***But yet just because of that aloofness – as long as they keep you in the dark, and that sense of hammer, control, or regulation***….You know, one of the wake up calls for me in this whole thing…was this guy, Jim Dollarship. He's a BLM range cons and 15 years ago we both sat down eating our lunch, right out in the middle of this pasture we were going to do a little surveying, a little monitoring, a little everything. We just sat there and we were both just absorbed with the moment. And that moment right then was when I think I knew I liked him. I knew he was different. He wasn't just the indistinguishable face in the agency. And this guy it wasn't a job for him, but…***he wasn't talking to me as though he knew everything and I did not. …That's important. And that moment was the moment that I decided I'm not going to play games with him.*** Before that you had the role, the rancher role, the agency role, you played the game. And I said, if I could tell him what I would like this landscape to look like and he can tell me what he wanted, maybe we could make it work – but it was voluntary. He had to step out and do some things that his superior might not have thought was good practice… ***That was the big deal for me because can I trust him***…. Jim was my break, my personal testimony …In other words, he had the regulatory capacity to do things, change the landscape. But I had the cattle and I had the tools. And all he had was the ideas. He didn't really have any tools. Now he could finally make it tough enough on me that, you know, whatever. But I was dumb enough to think that by God, we can do this job. ***And he was willing to give it the old college try too. And so we both stepped out***, and I'm sure there were times he felt threatened too …" (Cadre – 5) **T19-7**

TABLE #20 – WILLINGNESS TO ENGAGE
IN RIPARIAN MANAGEMENT ACTIVITES

"The reality of short-term economic impacts, because of changes in grazing practices, may be holding some people back." (D.C. Official – 1) **T20-1**

"…***they [livestock operators] do understand that normally it's going to cost them more money to do it [change their grazing strategies***]. More fences, more riding, you know, moving your cows to different parts at a different time. And that's a resistance because these folks are having a hard time making a living. The cattle market is cyclic, it's up and it's down. There are other government programs out there through the NRCS – their role is to work with private landowners. So there are a lot of cost-share things that are out there, but, again, that still costs ya. It may be 50%, but they still have to come up with the other 50%. So it's usually something out of their pocket, and it's changes beyond how they've managed their ranch in the past***….[But,] those progressive ranchers are out there and they understand this [that you can have as much forage or more forage by changes in management] and they know that different grazing strategies and doing things different is a benefit to their business***." (Cadre – 1) **T20-2**

"In my opinion, livestock operators would have better weaning rates on their cattle. They would generate more forage, more succulent and more palatable forage, which exists in riparian areas than if they grazed it to the bone. ***Change the management, the livestock operator is not going to suck up that much expense because in the long run he's going to get more money at market.*** The trick is getting them to believe that." (Cadre – 2) **T20-3**

"[For many environmental communities] the bottom line is – if we got all cows off public lands there would be no riparian degradation. I'm not saying all environmental groups do that, but I know that's a major thrust in a lot of big environmental groups – that cows are the biggest degrader of public lands in American history. …So that emphasis there becomes get the cows off of there. ***Screw the riparian areas, the riparian areas will be fine if we get the cows off of there….From my personal perspective here in the eastern valley, I want to keep ranchers on the land.*** We want them to have the water they need, we want them to have the forage, because otherwise we get condos. And [the ranchers] are becoming more aware, they hear from the environmental community…we want to keep you in Ag. In this neck of the woods we want to keep them in Agriculture for the simple reason that if we don't the whole damn place is going to be paved over…I'd rather see Bob's ranch down there and Joe's cattle all over my land then condominiums right next door or all along the highway on the way up here. So, what's the best way to keep those guys on their land – what's the best way to do that? Make 'em aware of how to arrange their grazing systems properly and to protect their valuable resources i.e. riparian areas. Then they won't have a bitch with the BLM and they won't have a bitch with the local enviros." (Cadre – 2) **T20-4**

TABLE #21- PERSPECTIVE

"I honestly feel then and now that ***the greatest barrier to moving this work forward is [that] not enough people have a greater vision. The vision is just too narrow in too many people that can affect change.*** They're focusing in on their area or their particular need – and this whole approach is designed to make a long term change on a very large landscape. So, there you've got this whole different thought process going on." (NRST – 1) **T21-1**

"What do you see when you look across that landscape? That twenty year old eye is very different from that sixty year old eye. Because the sixty year old now has three decades of experience that have allowed them to interpret it very differently than that twenty year old. That twenty year old went through college and got a very biased view of the world, a very unrealistic view of the world….***What we have coming out of college is idealistic youth, and as an idealistic person you are driven by a very limited set of values and experience. And that drives his work. If my idea is, if I associate with livestock growers, [then] livestock grazing does not cause a problem. If I associate with the environmental community, livestock grazing causes all the problems."*** (Cadre – 1) **T21-2**

"And we've never done a good job of recognizing the importance of team...[or] of the contribution of another discipline...each team member then has to respect the contribution of the other…. you have to bring in an recognize those contributions. The other people have to do the same thing. ***I think that realization, and that's gotta be the hardest thing for any of us because that's socialization, an internal value change, and that is only incurred with experience.*** You know, Leonard and Elmore, these guys have been here thirty years – think back as to where they came from and where they are going. " (Cadre – 1) **T21-3**

"My perspective is that so often, because of how hard everyone is running to do that job that they're being paid to do, it's so easy to get down on the job. ***It's so easy to get focused in just on the job you're doing, and you don't have time to do this interdisciplinary stuff*** – even though our whole basis for management is an interdisciplinary focus." (Riparian Coordinator – 1) **T21-4**

"And it's part of our nature to simplify things to make them understandable. We've tried to make it so simple, that people no longer understand the intricacies and difficulties that a natural system yield." (Cadre – 1) **T21-5**

"…it's been interesting coming back to D.C. after having been in the field and we still – ***people have a tendency to focus in instead of broaden out***. It's just a human tendency for the most part." (D.C. Official – 1) **T21-6**

"I was impressed with Elmore and others [who]…certainly had a broader vision geographically." (D.C. Official – 2) **T21-7**

"…and what PFC is good at…is to get people to look at certain things. It's to take them away from their interests. If you're a wildlifer, you look at wildlife stuff. If you're a rancher, you look at livestock stuff. If you're a fish guy, you look at water stuff. If you're a geologist, you look at soil stuff. We all tend to be myopic. ***And with the qualitative process, it helps us move away from that myopic approach.*** And I think that's appropriate…Because everything we do is interrelated….Even though as humans we like categorization....We try and categorize, and it s the myopic approach of I'm a trained ranger person, I'm a trained fish person, my training is all important. And those are a bunch of idiots over there, and we've never actually recognized the importance [of other disciplines]." (Cadre – 1) **T21-8**

TABLE #22 - OPENNESS TO INNOVATION

"Let's face it every professor you've probably ever had has shown bias, you know….***And I think part of it that contributes to it [failure] too…is the parochialism of, you know, 'I went to Utah State and these are the methods that I learned here'***." (D.C. Official – 1) **T22-1**

"We put a lot of hours into that one and we did a lot of work with those people, and it was personalities in the Fish and Wildlife Service that were just not going to let it happen. ***They were against anything and everything. They ended up putting so many constraints on the Forest Service that it's costing them over $100,000 per year to monitor just to allow grazing to still occur.*** [And the stuff they're monitoring] really is totally worthless information. I mean they shouldn't be – they don't even need to do it." (NRST – 1) **T22-2**

"…it's kind of an evolution…You've got the grandpa who came and ranched and he did it his way. Then his son took over the ranch and he, you know, grazes the cows the same way. Then the grandson comes and does the same, ***and you have three generations of people that [believe] 'this is how you ranch and raise cattle.' To make changes to in your operation [regarding] how you graze or the grazing strategies used on your ranch – it's a change in thinking…But then there's some real progressive people out there too. I mean these are college educated folks***, they might be third generation, but they went to CSU or whatever. They're businessmen, they're using computers and calving weights and managing their herds differently, and they understand vegetation management a lot differently than either their dad or grandfather. So I see that happening out west too, so that's why I was saying it's kind of an evolutionary process. Some things change, but a lot of it doesn't." (Cadre – 1) **T22-3**

"As Ty Tykes says***, your group has to have gotten relatively bloody and beaten up to recognize this [collaboration] is the only option they have left, until they recognize it as the only option, you're gonna get beat up.*** You talk to - I can't remember his name, he's actually done a bunch of work with BLM on conflict collaboration. His criteria to come in, have all other possible avenues been exhausted? He does not show up. And he claims great credit and great success. And he is! But that's because he comes in after every other possible avenue has been exhausted. All the judicial, all the appeals, all the administrative. So there is no choice. People beat each other up enough, that they now recognize their choice. And we pretend that we're gonna - without exhausting those - that we can just go in and have a big group hug and this work." (Cadre – 2) **T22-4**

TABLE #23 - WORK WITH THE WILLING

"If you toss out both extremes, then we start to have a middle. And in that middle you have people that you can sway, and people that you probably won't sway. ***So, for the most bang for the buck, go with the ones you think maybe you can.…You know, work with the willing, work with the ones you think you can get through to because you're not going to [get] that guy or that guy***, because this guy over here he doesn't give a shit about riparian 'cause he wants the cows off public lands. This guy over here doesn't give a shit about public land managers, or environmentalists, or whatever. He doesn't give a shit about anything except making money with his cows. "(Cadre – 1) **T23-1**

"***Some people you may never convince. I mean the radical environmentalists of the world are just not willing*** to take, I mean, They can't back up….Some people get themselves so far out on a limb that they don't dare come back, because they'll lose all of their credibility….I mean those people of the world you're never going to convince. But there's more moderate people that we can bring together that really – when you get a good group together and they come out with a strategy." (Riparian Coordinator – 1) **T23-2**

"…trying to break down those barrier between positions of people, and positions of people coming from opposite ends. There's usually more than one end to this rope***, but when people are positioning you're not going to work together. What you need to do is establish common needs***." (D.C. Official – 1) **T23-3**

"Well, I guess there's specific points it's [PFC] worked probably pretty well as a conflict resolution tool. But I also feel that on the whole, in the western landscape, it hasn't done a thing. And I don't mean that as strongly as it sounds….***I don't think that the folks, the majority of folks that have been against let's say livestock grazing as one of the issues are going to allow PFC to be used as a tool to change their minds. Period.***"(D.C. Official – 2) **T23-4**

"I think it's a great collaboration tool when people want to collaborate." (Cadre – 2) **T23-5**

TABLE #24 - IMPORTANCE OF COMMITMENT

"I think several factors on the positive side. One, I think it's the personal commitment of the riparian team itself. ***They're committed to the work that they're doing***." (D.C. Official – 1) **T24-1**

"I think the thing that's made the Colorado cadre so successful is that we have this ***great core of dedicated instructors***…" (Cadre – 1) **T24-2**

"Like Arizona only has two members - so there's not a whole lot going. And those two guys. I mean, I give them so much credit because they do a couple of classes every year, with just the two of them. ***They do more with just the two of them, than some states do with 7 members***." (NRST – 1) **T24-3**

"We were really close to getting one [a training session set up]…for this organization [that] was willing to let us come in as a group…***but I couldn't get a commitment from that [the Utah] cadre***, you know, our pool." (Cadre – 2) **T24-4**

TABLE # 25 - NATURE OF COMMITMENT

Willingness to shoulder additional responsibilities.

"***I would say in terms of factors that are the biggest successes are individuals who have a passion for this, and want to make it successful***. And Wayne Elmore comes most immediately to mind on that, but he's had a great team – good folks on the team who are good at what they do and have been very successful in that. And then the cadre, not the training cadre but the ad hoc network of people [there are some people in that network that also really stand out]…***Folks like that have cared so much about what it is we're trying to do. And, they've been willing to put more than just eight hours a day, five days a week into it – making it a passion, making it something that defines who they are, defines success in a career.*** To me, it's the people who care enough about it that make it, that's one of the factors that makes it a success that we haven't talked about already." (D.C. Official – 1) **T25-1**

"…and the cadres are really all volunteers. ***In my case I'm not even paid…We're taking time off work to do something.*** [The coordinator] has kind of found a way to help up a little bit with travel expenses. But, so here you've got someone that feels it and believes it. And I know that all of our instructors in Colorado…they have a passion." (Cadre – 1) **T25-2**

"And in my level of the organization, I mean, we all have our own bosses and stuff, and this is full disclosure with my boss, but I pretty much do this because I want to and there is no pressure from the Forest Service saying 'get involved with the PFC, be involved in the state cadre, teach some of these PFC sessions, you know, do it on your allotment management planning.' So it's all me that's really doing it, and there is no funding that comes via the Forest Service. So when I'm part of the team to teach this, there's something that I kind of have to give up, you know….***For a lot of people on the cadre this isn't their normal job, so they have to give something up to do this***." (Cadre – 2) **T25-3**

Willingness to build interest in and political support for initiative through networking.

"I was having to do a lot of this stuff [informal networking - make calls, or drive or walk over to somebody and just start talking] on my own time, on the weekends, to build the program [referring to development of collaborative management efforts on other forests]" (NRST – 1) **T25-4**

"I think it's something that you could minimize if you wanted to just kind of say, 'well, we'll pick two places and show up there and see who shows up.' Or, you know, I think I take a pretty active role, in that I heavily promote [the training sessions]. ***I spend a lot of time in the offices and talking to people to try, and talking to people outside of normal channels that we're typically trying, to find out if there's some interest***." (Cadre – 3) **T25-5**

"So make contacts early, [and] maintain them. That will put you in connection with the power operations. You keep your contacts with the landowners that you've worked with so they can tell other people 'yes'. They can tell their Congressmen 'yes', they can call if something like this is beginning to fade away – they can call and say, 'We don't want this to happen. We want it to be maintained.' ***But anybody in a bureaucracy that thinks you can live long in an organization without political support is crazy. So you set out to establish it to start with, and you maintain it***. Those things have to be thought about, and they have to be maintained. They don't occur by accident – you can't just sit there out on a limb like a little bird with your mouth open and say, 'Feed me.' Politics is not a nasty word, it's the way the world works." (D.C. Official – 2) **T25-6**

"At the same time, they had an upland assessment process, and the upland assessment process didn't have the same leader type...cause Wayne's a good leader, he's a great cheerleader, he's boisterous, he has the knowledge, ***and he had the ear of the BLM director as well as the Forest Service chief....And having their ear created a very different scenario. The upland didn't have that.*** What the upland had was, basically, lots of criticism." (Cadre – 4) **T25-7**

"Well, I would say cultivate your own relationships. You just don't wait for your sugar daddy to drop dead, you watch – where did your sugar daddy get these connections? Ordained by God? No. He created and maintained them. And he's got connections with other people further down in the hierarchy that are liable to be there someday. These are networks and connections…Ah, it's really an amazing thing…it's almost as if networking has fallen out of favor. Everybody that works in the system has the potential to network….***You create relationships when you're young and you maintain them when you're older. Sooner or later, those connections are with people that are in charge.***" (D.C. Official – 2) **T25-8**

"You know, she's not afraid to talk to anybody. And she's talked to everybody from Secretaries of the Interior and, not on the Agriculture side, but to all kinds of directors and chiefs and everything else, governors, governor's aides, and Senators and Congressmen – we've done briefings back in [D.C.] and she just jumps right in there….***One of her best lines is, when we go to a meeting someplace and they have these big social hours, she'll walk up and she'll look around and she'll say, 'All right Wayne, let's work this crowd'.***" (NRST – 2) **T25-9**

TABLE # 26 - LEADERSHIP
"There's been every degree of effectiveness from just really excellent, really strong cadres, to cadres that just couldn't hardly get started. ***And it's, as with any activity, it always hinges on the combination of people that are together in any one situation to get something done and come together.*** It's the same thing with a collaborative group. In some geographic areas there are just certain personalities and certain individuals with certain visions that come together and the synergy is such that they can really move forward and work together. And it was the same thing with the state cadres, so we have every level of, I guess, operational effectiveness, you could call it." (NRST – 1) **T26-1** "I think that bringing that team [NRST] together was really a stroke, um, it was a good move. I think that the individual players were, in most cases, they were the right person at the right time, at the right place. ***And, you know, obviously the energy that Wayne brings to the table is just phenomenal. The energy and his own experience as well***." (Riparian Coordinator – 1) **T26-2** "I'm more of a good organizer and cheerleader. So, typically, at most of the sessions I don't do the classroom instruction. I help out more in [organizing] the field sessions." (Cadre – 1) **T26-3** "From what I've seen there's been a lot of turnover of some of the network [cadre] people. And talking to folks on the ground in the network [cadres] in the past, there's a really strong, close knit network [cadres] in several states and when people leave ***and there's one strong advocate in that network [cadre], and that person's gone it seems to fall apart. To try and get somebody back into that network [cadre] who is a strong leader is what's needed in the states.*** Now, whether Forest Service takes the role, or NRCS, or BLM it doesn't really matter. I think what is lacking is, if we want to bring the network [cadre] coordination and emphasis back, we need to have one strong leader to be in the network [cadre]." (Riparian Coordinator – 2) **T26-4** "…***and Utah, the state that completely fell apart, didn't do anything [teach any session, etc.] Part of the problem was their cadre coordinator retired***….The guy who took the cadre coordinators job was given the responsibility, but he didn't really want it. It was like one of 5,000 responsibilities that that guy had. And he was brand new at his job. So he didn't do anything to get the cadre together, and they didn't hold any classes." (NRST – 2) **T26-5** "In our Ripcord group we probably have, I don't know, 18 or 12 folks involved. Four of them were the ringleaders. Four of them kept things going. And in the course of a 6 to 12 month period of time two of those people moved on. And even though w got replacements that came in, the energy level was gone – as well as the commitment. Even though the two new people…all believed in interdisciplinary, they all believed in riparian…But the chemistry was no longer there….Unfortunately that's the case. And it's not so much getting along, as it's just the willingness to invest energies in certain ways and to bring enthusiasm and that type of thing. ***And obviously Wayne is the kingpin in the National Riparian Service Team. And there's nothing wrong with that because he's brought his years of experience and enthusiasm to the table, but the question has to be asked: What happens if Wayne or Steve or Don move on? Has the team got a sufficient, a minimum, core mission to continue?***" (Riparian Coordinator – 1) **T26-6**

TABLE # 27 - COMMITMENT AS A POTENTIAL BARRIER
"Well, one I would say is that probably you'd have to give the team itself credit for the successes they've made so far - they've increased awareness. The time, the effort they put into this - because they're all very dedicated people and I think that's what's going to make this successful. At the same time, I'm not sure that that may not be a barrier. ***Because they've got a true investment in this. This is what they've been doing. And so that same thing that's made it so successful as it is may [also] be the barrier to moving to the next step.***" (D.C. Official – 1) **T27-1**

TABLE #28 - PERSONALITY
Personalities and resulting relationships from the past. "***Probably the key factor, the most important factor is there's just, as in everything we do, it's personalities.*** There's just individuals that just haven't clicked on either the process, or haven't clicked with individuals on the team, or haven't clicked with individuals in our office in the Forest Service. ***And, it's just been things that probably have less to do with the Riparian Service Team and more to do with just relationships in general.***" (D.C. Official – 1) **T28-1** "It has to do more with what experiences they've [landowners] had with personalities in the various agencies in the past. …It's not only just an agency culture and the landowner culture, but ***a lot of times it's the personalities within the agencies that cause the problems….So, it has a lot to do with past history and experience.*** I really believe it has to do with personalities." (Riparian Coordinator – 1) **T28-2** "***And if it [trust] has been damaged in an area, and it could have been damaged way back years ago by one employee that just didn't have any real concern for the community, the social aspect***…They did some things, that in their own mind were right, regulations were right because this is what we're supposed to be doing. But they didn't think about the social aspect and they just ruined, at least for a generation or two, any credit or respect the agency should have just because of one or two people." (Cadre – 1) **T28-3** **NRST Willingness to Create Environments that Foster Re-building of Trust:** Oh yeah, yeah that's factor, there's just a lot of distrust of anything to do with the federal government. That's why I always go back to [the fact that] it just really is relationship building first. ...It's like any relationship, somebody has to be willing to go first***. Somebody has to put out their hand first. And I feel, my personal conviction is, that many times it's got to be the agency people that do it. We need to be take a leadership role in that - not a dominating role, but an initiating role.*** (NRST – 1) **T28-4**

Yeah, well I did have to tell that one guy we weren't coming (laugh). He was a forest service ranger that said that he wanted us to come and just talk to the forest service, so they could get their act together before everybody else came. And I said, 'well that's not the way we work.' And he said, 'well, that's the way we work.' And I said, 'then we won't come.' And he said, 'don't threaten me.' And I said, 'it's not a threat. It is not part of our mandate, which was to work across ownership boundaries. That's why we have NRCS involved in this, it's to represent the private landowners.' And he hung up on me, and then he called back a little bit later and said, 'ok I'll do it.***' And it turned out to be one of our best ones.*** (NRST – 2) **T28-5**

The ones [service trips] that go really well are [the ones] where people have either have built working relationships and have a certain amount of trust built. Or they have the desire to do it, if they're in just a very initial stage. ...Trips that haven't gone so well is where people are still in the sort of the 'them and us mentality.' Actually, the way we function as a team is we rarely get into those situations, because we assess that ahead of time. If we feel that we can help people get out of the them and us mode, we'll go ahead and take the assignment. If the requester is way too much to the you know, we want you to come in and prove that we're right and they're wrong, we will not get involved in that. That's not fruitful. ... To get back to kind of this whole concept of the 'them and us thinking,' something I've really noticed a lot with agency folks is just in he way they word something. They'll be talking and they'll say, 'we want these folks to just understand what our objectives are.'.. It's always the forest service objective or the BLM objective, you see. Our whole work is to create a vision so the sustainability of riparian area, and the watershed, of course, is everybody's vision. It's a way to create a whole common vision. So, it's not a forest service objective, it's a land condition objective that is shared by all. (NRST – 1) **T28-6**

I think it's been a great public relations tool in our state...I think what's happening is it's helping the rest of the agency in gaining some respect in the eyes of the public. (Cadre – 1) **T28-7**

The biggest successes we've had have been working with diverse groups where cooperative relationships have already been established. Where they have worked through their differences, and they were beaten down and wondering 'where are we going to go form here?' ***And the others where there was success but may not have been as screamingly wonderful would be the ones where they were willing to come and participate, and they did develop that repoire and pulled together to work.*** Those are equally as good, but they can't do it as fast. …Areas where I've seen less success and where I think we need more follow-ups would be ones where not everybody showed up. We did invite everybody, but you didn't have cooperative involvement. (NRST – 3) **T28-8**

Individual personalities and character traits.

"And he [Wayne] had that combination of technical smarts – he was able to talk to anybody he could get a hold of. But he had that ability to emphasize with the person on the ground. To look at the mix of attributes, problem solving attributes, that he had at his disposal. You know, what it was like – biological capability – and he could understand the morphology and stream flow. But I think more than anything else, he understood people. ***And he understood that he needed to learn as much from every contact as he was teaching somebody else.*** And he just had that combination of dedication. He's probably the most dedicated person to conservation that I've ever known" (D.C. Official – 2) **T28-9**

"I think the dedication of the team, and the fact that they are a team – that they work together – has really contributed to the success. The overall attitude and demeanor – and whether you attribute that to the team as a whole or to Wayne's leadership – I don't know, I haven't seen them function. ***I can tell you though that because they go in to problem solve, because they work with people as equals – this demeanor gives them great success***. And that's probably, other than the fact that they are incredibly professional and very bright people, they don't go in to, it's the top-down again, to solve the problem. They go in to find a solution with other people. That's the biggest single factor." (D.C. Official – 3) **T28-10**

"I see the team, the respect that the team has [from] the livestock industry and by our professionals as being an asset. ***If we've got an issue, we bring the team in and they're in a problem solving kind of mode and trying to work both sides of it. I see that facilitating solutions that might not otherwise happen***." (D.C. Official – 4) **T28-11**

"Well, I've believed from the very start – well, for a very long time – that until you really understand somebody nothing is ever going to happen. You know, I carry around a quote from Socrates about what it takes to be a great orator and it basically says ***until you feel the other person's situation you'll never be an orator. You'll never be able to help people solve problems, you'll never get your ideas across to anybody, and I've always believed that.***" (NRST – 4) **T28-12**

"There were some disrespectful things that were going that I didn't think was very nice. And we talked it out. That's what I love about the team. That's going to happen, I'm going to say things sometimes that are disrespectful. It's whether or not I own up and say I'll admit I just said something that was inappropriate. If I'll apologize, or go forth with people not being very nice to each other. ***Because that's the whole thing - if we don't show that, you know, the importance of getting along, being respectful and maintaining a professional, professionalism with each other and a mutual respect, then it's going to reflect***, and… it's not going to get out a good message because that's the foundation of saying cooperative relationships…" (NRST – 3) **T28-13**

"You know, the fact that Steve Leonard walks, talks, is a livestock man or has been contributes to the success. ***The fact that Wayne is such a schmoozing talker, and very good at communicating with folks in a totally non-threatening fashion helps***.….Those are the kind of people we have to have on the team and the state cadres. Frankly, a lot of the government employees can be combative." (D.C. Official – 5) **T28-14**

"They're [NRST] great with people. They're good teachers. They speak to people and people listen. ***They have something to say, they say it well, they say it in a way that's not off-putting.*** Those people [NRST and key network members] are very, very, very good…They're very good. They're wonderful." (Cadre – 1) **T28-15**

TABLE #29 - REPUTATION AND CREDIBILITY

"Actually if you want to know the honest truth, the answer to that question [why people are able to put their values in their back pocket with this method] is that Wayne Elmore and Steve Leonard have so much respect from people. They know their names, they get to know them a little bit before class. ***And they have so much respect for these two men that they believe everything they say***. Those two, it's those two, it's Wayne and Steve…. Ranchers already have heard about them from other ranchers that they've worked with before. And they already know they're going to be treated fairly. So, they listen and they believe….***For example, Steve, he has so much experience – he is such a good ecologist it's unbelievable. But at the same time he has this persona. He's one of the cowboys, he dresses like a cowboy, he talks like a cowboy, and the cowboys just love him.*** They just relate to him so well. And he gravitates to them because he likes them too. And even like today, I don't know if you noticed but as soon as we were done and ready to eat lunch all the ranchers just went over to Steve and he talked to them for 20 minutes… ***And then Wayne, similarly, he – you know when you say, 'Is it personality or experience?' – it's both because when he was developing riparian management he knew that the only way to do it was to be sure and leave everybody with their dignity. Even when he was dealing with the ranchers that he knew maybe needed to cut the cow numbers he made darn sure that guy felt dignified all the time. And he listened to him a lot, he probably listened more than he talked kind of thing. So, his reputation has grown through those ranchers he first dealt with to now.*** The fact the he is known throughout the whole greater community within the western United States…***And the other thing, Wayne knows all the people in the Washington Office. He's like good friends with them***. I don't know any of them, not one. You know, I couldn't walk up and know who any of them are at all. And, they wouldn't know me from Adam. And so I would call up and be like, 'Hey, I need this favor' and they'd be like, 'Who are you?' Whereas Wayne can call anybody and get what he needs for our team. So it all depends on the people you put in place, I really think." (NRST – 1) **T29-1**

"***You get a Steve Leonard, you get a Wayne Elmore, you get a Janice, and a Ron Wiley. I have no question when they rank it. I agree…. But they have a huge level of experience that allows them to do things…*** But if I've got a kid that's got three days experience, and he's drank the night before, he's hung over, that will change his interpretation… Is there trust in the person who's done it….You send me Wayne Elmore, you send me Wiley, you send me Steve, I could be very trusting. You send me a kid who's got two weeks training? He might be dang good - or she - but the trust isn't there. You send me someone who's a wildlife person, the trust isn't there. You send me someone who's a range person, because I'm a range person, obviously I'll trust 'em, but [Laughter]. I trust everyone that is a range person, if they've done it, I have all the trust in the world." (Cadre – 1) **T29-2**

"…I think a lot of it [the success of the initiative] was personal credibility and personal contacts. ***I mean, he knew Secretary Babbit, he knew Jack Thomas and Mike Dombeck, Bob Armstrong, who's our assistant Secretary. I mean, he had a lot of contacts based on his work, and people meeting him and hearing about him. He had a lot of contacts that really – and he had a lot of credibility.*** Some interesting articles in Rangeland Magazine, and a lot of supporters that basically helped build a fairly wide credibility for him personally. I think it was that that had as much to do with it as anything. I don't think the idea of having a national team would have come if there wasn't somebody like Wayne." (D.C. Official – 1) **T29-3**

"***I don't have the reputation of the national team, or what do you call that – legendary status.*** I mean just because we've got a rancher on there [the cadre] doesn't mean all the Roy Rogers are going to show up." (Cadre – 2) **T29-4**

"He didn't show up at our [state cadre] training, he showed up when the national team showed up - when Steve Leonard showed up" (Cadre – 3) **T29-5**

TABLE #30 - REPUTATION AND CREDIBILITY AS A POTENTIAL BARRIER
"***And most people are scared of the Dream Team. They might be very critical of the Dream Team, and they don't say it.*** When I took the training with them, four days we're down there, I'm in the bar every night with people in the training. Everybody's critical. When it comes down to asking questions, almost sixty people, and no one hardly says a word. I'm the only one raising my hand…. But, what it really showed me there was, ***Wayne packs a lot of political power. People within the agency are scared of Wayne. They don't want to criticize Wayne because he is the guru, he has the ear of the director. He has the ear of the Forest Service chief. I don't think that's true anymore …But at that time, no one wanted to say anything.*** And Wayne has said, cause there was someone doing research here. Now his name's slipping, my god, let me think. Well, he was talking to one of them about the criticism. He didn't mention my name, but he talked about the apprehensions, cause I talked to him about it. ***And Wayne's comment was, 'Oh, that's Art, he's an academic, heck, don't listen to what he says***'. [Laughter]." (Cadre –1) **T30-1** "Nobody [on the NRST] pays attention [to my criticisms or concerns]…Even at the national trainings they give you stuff to write up, and I would write in it [concerns with certain aspects of methodolgy]…[but they don't engage in that dialogue, they don't reach out to other experts in the discipline…when asked why? Replied that it relates to the fact that team members are] "at the higher level….***The way it's set up it doesn't foster, you know from the national training on down, it doesn't foster any dialogue. It's more like 'I'm here to tell you how things are, and how they should be'***….And they'll say, 'You're saying such and such, but I don't agree with that. I think if you look at this, this, this, you know – you're wrong'." (Cadre – 2) **T30-2**

Chapter Seven: Conclusions and Recommendations

Introduction

Returning to the first objective of this study, the following section examines the riparian initiative in relation to the tenets of the dialogic model of collaboration. In order to set the context for such a discussion, I first provide a summary of the three traditional decision-making models outlined in chapter two. Next, I provide an overview of the dialogic model. I then review the goals, process and tools embraced within the riparian initiative, and discuss whether this initiative emulates the dialogic model of collaboration. In instances where the implementation of the riparian initiative differs from the principles outlined by its creators, I provide recommendations for improving consistency between theory and practice. It is important to note that because of the participatory nature of this study a number of programmatic changes have already been made based on evaluation results. In other words, most of the changes and adaptations have been on going. I conclude this chapter with a discussion regarding recommended future research efforts.

Traditional Models of Decision-Making

Regarding the nature of the public interest, a managerial perspective assumes that a homogenous and stable public interest exists outside of the policy making process. Supporters of the pluralist perspective, on the other hand, argue that a shared public interest does not exist. They believe that individual interests are stable and exist outside the policy process. Finally, a communitarian perspective posits that a common public interest, linked to a set of communal values and goals, can be created through the process

of communal self-government (geographically bounded communities). In other words, supporters of the communitarian model believe that individual interests are created and re-created through direct engagement in policy and decision-making processes.

Given the differences in the philosophical underpinnings of these three models, it is easy to see why each perspective advocates a different mechanism for advancing the public interest. The managerial perspective assumes that the public interest is advanced through technical, expert-driven problem solving that utilizes 'objective' criteria such as economic efficiency in order to create the one best policy that serves the interests of all (reflecting utilitarianism). The pluralist perspective, on the other hand, assumes that the public interest is advanced through the creation of an open political process that allows contending nationally organized interests (including science) equal opportunity to influence public policy. Finally, supporters of the communitarian model argue that local interests have traditionally been left out of the national level policy process. Thus, they advocate for the devolution of the policy process to a community level (geographically bounded) where local citizens can create a common interest through participation in self-government.

Implicit within each of the three mechanisms for advancing the public interest are assumptions regarding power. Supporters of a managerial model believe that the power brokers within the policy process should be the elite members of society (e.g., elected officials, scientific experts, trained bureaucrats, and the occasional educated citizen) because they are the most 'objective' and, therefore, the best qualified to create policies that provide the greatest benefit. In contrast, supporters of the pluralist model argue that power should be equally distributed among nationally organized interests. As

previously noted, the definition of organized interests includes science and scientists. Finally, advocates of the communitarian model posit that power should be devolved from the national level and placed in the hands of local citizens.

The Dialogic Model of Decision-Making

As noted in chapter two, the dialogic model aligns most closely with the communitiarian model in its conception of the public interest. Specifically, the dialogic perspective assumes that the public interest is not stable, nor is it shared. However, supporters of the dialogic model posit that a shared public interest can be created because individual interests are changeable. The goal of the dialogic model is to create this common public interest through dialogue (mutual exchange and learning) and participation in the policy or decision-making process. Supporters of the dialogic model argue that it is through participation in the policy process that individuals fully realize their own self-interests and discover common ground among other individuals who belong to different communities of place (local interests) or interest (national interests).

According to Williams and Matheny (1995) an important component of the dialogic model is a reliance on the 'dialogic model of rationality.' One of the conditions necessary for creating such dialogue is a reliance on science as a way to structure this debate. The role of science in this debate is not to provide answers or resolve conflicts; rather, it is to provide a setting where individuals are equally informed and able to evaluate the assumptions and underlying world views (which are influenced by both ideal and material factors, and the structural context within which they are positioned) of their

opponents. It is through this type of dialogue that the truth about the public interest emerges.

Although the discovery of the public interest is a crucial first step in designing policies that advance the public interest, supporters of the dialogic model argue that it is also important to identify mechanisms for situating this dialogue within larger political and economic structures. Specifically, individual, community and institutional capacity for achieving collective action must be increased through the development of vertical and horizontal networks that assist in the development of a common identity as well as the mobilization of resources. As Duane (1997:778) notes, "the critical challenge is to design and implement institutional structures in which the proper relationships between horizontal and vertical networks can enhance our capacity for collective action."

Similarly, Williams and Matheny (1995) note that the efforts of the federal government must be directed toward overcoming the obstacles that currently face citizens. These obstacles are positioned both in the ideal and material dimension and include the following: obstacles to organization, information gathering, and effective participation in decision making; financial constraints or disincentives; time constraints (as a result of child care, ranching responsibilities, multiple jobs); and inability to gather the labor or supplies needed to implement management changes on the ground. As noted in chapter two, one of the ways that the Federal government can assist in this task is by producing the collective goods that are too comprehensive and expensive for states and localities to produce, but are critical to democratic decision-making. Another way that the Federal government can work to remove existing obstacles is by re-arranging existing central relations between the market, state and democracy (through both legislative

mandates and structural transformations) to favor the environment and democratic communities over capitalism.

The Riparian Initiative

The following section provides a discussion of the riparian initiative as a dialogic model of collaboration. In an effort to establish a means for comparison, I discuss the principles underlying the riparian initiative in relation to the nature of the public interest, the creation of forums for housing the dialogic model of rationality and the development of structures for linking local action to larger power structures (Table 31). As noted in chapters five and six, implementation efforts do not always adhere to these principles. In light of this fact, I have chosen to present the remainder of this section in the following manner. I first outline the principles of the riparian initiative. I then discuss the characteristics regarding situations when on-the-ground implementation efforts differ from these principles, and outline recommendations for maintaining consistency between principles and practice. Finally, when applicable I provide insight into a number of programmatic and operational changes that have already been made.

Table 31: Comparison Between the Dialogic Model and the Riparian Initiative

DIALOGIC MODEL	**RIPARIAN INTIATIVE**
Nature of the Public Interest Through dialogue between relevant stakeholders (representing communities of place and interest), individuals realize their own self-interest and the truth about the public interest emerges.	*Nature of the Public Interest* Both principles and practice match model. • PFC tool has the potential to enable stakeholders to find a shared interest without mandating a particular set of values.
Advancing the Public Interest Create forums for housing policy discussions based on the **'dialogic model of rationality'** - use science to structure technically complex debates.	*Advancing the Public Interest* Principles match model, but practices do not always reflect principles. • Diversity of participants • More likely to have diverse participants at service trips than at PFC workshops, but neither setting guaranteed. • Science structured dialogue • Sought in principle, but not always achieved because PFC is often not accepted for a variety of reasons (some out of the control of initiative implementers): (1) riparian issues not accepted as the appropriate focus; (2) 'riparian function' as defined by PFC is not accepted; (3) notion that function leads to values is not accepted; or (4) collaborative decision-making not accepted. • Mutual learning, relationship building • Occurs in field, but the classroom setting is often more restrictive.
Assumptions Regarding Power Government seeks to assist local efforts to build capacity for achieving collective action - develop vertical and horizontal networks designed to link local action to larger power structures through the creation of new institutions.	*Assumptions Regarding Power* Initiative designers were initially not cognizant of this principle, but have since come to recognize its importance. • Capacity building • Originally focused on information transfer, deliberate efforts made recently to also develop social and financial capital. • Network as support structure for local action • Designers recognized the importance of this network, but unsure how to create.

The Nature of the Public Interest

The philosophical tenets underlying the riparian initiative share many similarities to the dialogic model described above (Table 31). First, there is a recognition that a stable and shared public interest regarding the management of riparian areas does not currently exist. However, supporters of the dialogic model believe that a common interest regarding the functioning of riparian areas can be created. The founders of the riparian initiative argue that although the management of riparian areas and water resources is currently marked by conflict, many of these conflicts are actually illusory (at least at this point in time) and can be overcome by a focus on riparian function. They argue that this is the case because individuals with divergent interests are often fighting over issues that are beyond the scope of the decision-making space in which they are operating.

According to the founders of the riparian initiative, many of the riparian related conflicts center on the ecological, social and economic values that can be provided by properly functioning stream systems. However, a majority of the streams in the U.S. are not in proper functioning condition. Thus, one of the goals of the riparian initiative is to help individuals move beyond riparian-related conflicts by establishing a common need or focus on restoring and maintaining streams in proper functioning condition prior to engaging in a discussion regarding the desired future condition of an area.

The Dialogic Model of Rationality

Participation of Diverse Interests

Both service trips and PFC workshops are premised on the inclusion of diverse interests, representing communities of place and interest (individuals and organized groups). So, in principle these efforts are consistent with a dialogic model (Table 31). Regarding service trips, the objective is to identify and engage the full range of affected stakeholders including a variety of agency officials (local, state, federal and tribal) representing diverse disciplinary backgrounds, user groups (e.g., permittees, recreationists, fish and wildlife interests), and any other interested individuals and groups. PFC workshops function differently than service trips in that they are more of an educational campaign than a problem-solving effort (which diverges from a dialogic model's focus on discourse and deliberation); however, they share a similar goal regarding the participation of diverse interests. As previously mentioned, success in terms of encouraging dynamic dialogue and building ownership (and commitment) in the definition of the problems and solutions is linked to the up-front participation of diverse interests in both service trips and PFC workshops.

In practice, service trips often do have the participation of the full range of affected stakeholders; however, this is not always the case. As previously noted, service trips are initiated when an individual or member of an existing group contacts the NRST coordinator requesting assistance on a place-based riparian-related conflict. At this time, efforts are made to engage the full range of affected stakeholders representing both communities of place and interest. Although the NRST coordinator strives to convey the

importance of including diverse interests to the local requester, the local contact is typically responsible for soliciting participation. Sometimes they are successful in recruiting affected stakeholders, other times they are not.

In order to enhance the effectiveness of service trips, NRST members themselves (or part-time, contracted members) must be more involved in identifying and assuring that the range of stakeholders are involved in these efforts. This is an alternative to the notion of 'working with the willing,' or the belief that implementation activities should be carried out only in situations where people are receptive. Based on the results of the evaluation, the NRST has recently made efforts to address this issue through the use of a trained meeting facilitator. Prior to engaging in a number of service trips this past field season, the NRST contracted with this facilitator to visit the site and conduct informal interviews with local interests in an effort to determine the nature of the conflict and identify the affected stakeholders. Once stakeholders were identified, the facilitator worked one-on-one to ensure the participation of affected individuals. As a result of this pre-work, the NRST was assured that the required stakeholders would be present prior to their arrival at the field site.

The second way in which this type of pre-work may be useful in the future is in facilitating group agreement on service trip objectives. Currently, the local requester works with the NRST coordinator to establish service trip objectives. In some instances, the group agrees upon these objectives; in others, they do not. As explained in detail below, a number of assumptions are imbedded in the decision to establish group objectives based on stream and riparian function. In order to create a forum capable of

housing the dialogic model of rationality, the group must first be allowed to negotiate and agree upon these assumptions.

Adding a day or half a day's worth of facilitated discussion prior to actual service trip, particularly in instances where the group is newly formed, may increase the group's willingness to accept PFC as both an assessment method and communication tool. Having such buy-off (ownership) from the start would enable the NRST to have more of an impact in terms of presenting technically complex information and moving a group toward the creation and implementation of on-the-ground management conditions. Pre-work of this nature would also identify situations in which the needs of a particular group cannot be met by the services provided by the NRST. For instance, the group may be engaged in a value-based conflict that will not be resolved simply by the provision of information regarding riparian-wetland function.

Participation in facilitated discussions prior to the arrival of the NRST may also help build trust and develop relationships between participants (build social capital), which some theorists (Coleman 1988) argue is required prior to the creation of human capital (or the development of individual skills). This recommendation is consistent with the philosophy underlying the riparian initiative, which highlights the importance of building relationships before engaging in a discussion of the technical aspects of stream function. Within the current organization, information sharing and trust/relationship building occurs as part service trips themselves. This model works well when dealing with existing groups who have already demonstrated a willingness and commitment to work together; however, it has proven to be less effective when dealing with newly formed groups. As interview respondents noted, service trips have tended to be more

successful when requesters were part of existing groups. That is not to say that conducting service trips has not helped build social and human capital (increase individual skill-based and improve relationships) within newly formed groups, it has. But, as team members note these groups often need more time to organize and develop relationships as a group before they can begin to implement changes on the ground.

Regarding PFC workshops, evaluation results indicate that cadre members have had a difficult time securing the involvement of diverse interests. Traditionally, cadre members have relied on a shotgun approach to soliciting involvement of workshop participants. By 'shotgun approach,' I mean they picked a location to host a session, advertised and instructed the session for whoever showed up. Although there is a place for such an approach, cadre members are more likely to solicit the participation of diverse interests if they also rely on deliberate and personal outreach efforts. The discussion regarding the Colorado cadre in chapter five, provides a detailed explanation of the type of outreach needed.

In addition to engaging in concerted outreach efforts, cadres are more likely to develop interest among non-traditional participants if they are better able to design and market services to different groups. For instance, the Colorado cadre is in the process of developing grazing management courses and a shortened PFC course to encourage landowner participation. The goal of such courses is to help private landowners overcome the obstacles to participation that they currently face. In these two instances, the objective is to help landowners overcome obstacles presented by resource constraints (or material factors such as money, labor, time). By offering grazing management courses, initiative implementers are able to better assist individual landowners in

selecting the management option that best suits their individual situation and needs. By offering shortened PFC workshops, initiative implementers are able to solicit participation from landowners who are currently unable to attend the typical three day courses due to existing financial and time constraints.

In addition to sponsoring new courses designed to solicit participation from landowners, the Colorado cadre recently hosted the NRST's newly created 'PFC for managers' course. This course is designed to build ownership in and support (political and financial) for the riparian initiative among middle managers within the agencies (BLM, USFS, NRCS). The need to increase the involvement of agency managers in the riparian initiative is further discussed in the section below, entitled 'Link Local Action to Larger Power Structures.'

Science Structures the Debate (PFC tool)

The current strategy underlying the riparian initiative is marked by a reliance on science as a means for structuring riparian-related debates, which is consistent with the dialogic model (Table 31). Specifically, the initiative relies on the PFC tool and a focus on the physical functioning of stream and riparian areas. Within the initiative, PFC functions as both an assessment and a communication tool. Ideally, PFC structures the debate because it defines the decision making space based on the premise that a non-functioning system cannot produce the benefits and values at the heart of most riparian-related conflicts. However, in practice, science or the PFC tool is not always successfully used to structure the debate because it is not always accepted by participants for a variety

of reasons. Before individuals and groups can buy off on PFC, they must first buy off on a number of assumptions.

First, they must agree that functioning riparian areas represents a common concern and that any activity that maintains riparian function over time represents an acceptable use. Individuals who are concerned specifically with issues such as the removal of grazing from federal lands, do not always agree with this assumption. Specifically, as interview respondents noted, some individuals and groups are philosophically opposed to grazing on public lands regardless of the impact to riparian areas. As a result, it is unlikely that these types of value-conflicts will be resolved through a reliance on the PFC tool.

Second, individuals must buy off on the assumption that functioning riparian areas should be defined in relation to existing conditions. Inherent within the PFC assessment method is the acceptance of existing human constraints or impacts. Specifically, the definition of proper function (normative term), as employed within PFC assessment, refers to the highest ecological status a riparian-wetland can attain given political, social or economic constraints such as existing roads and dams. In other words, the PFC assessment considers the following question: What is the proper functioning condition of this riparian-wetland area, given the presence of a large hydroelectric dam upstream? A contrasting definition of proper function is one that assesses streams in relation to the highest ecological status an area can attain given no constraints (potential natural community). It is interesting to consider how the assessment of condition would differ based on which definition of 'proper functioning' was used. Individuals who view the hydrological modification of stream systems (e.g., water diversion) as an issue to be

addressed as part of a discussion regarding riparian-wetland health, are often unable to buy-off on PFC's assumption to ignore existing conditions.

Third, before individuals and groups can buy off on PFC they must agree that riparian function proceeds the achievement of certain values (desired future condition) from that system. In other words, participants must agree to define the issue in terms of achieving proper functioning condition rather than obtaining a certain desired future condition. In real world terms, that means that individuals and groups with an interest in protecting fish populations must agree with the premise that stream condition should not be evaluated based on the presence of course woody debris unless that system requires wood to function properly. Similarly, individuals and groups must agree that it is not worthwhile to invest in the discussion and/or implementation of management changes, such as the placement of course woody debris to provide fish habitat, with regard to stream systems that are non-functioning (and therefore have a highly likelihood of 'blowing those structures out').

Finally, before individuals and groups will buy-off on PFC they must agree with the collaborative mission of the riparian initiative. Critical to such acceptance is agreement regarding the appropriate use of science. Supporters of PFC argue that it serves as an appropriate method for structuring riparian-wetland debates because it creates a transparent learning and information collection process. The PFC process is labeled as 'transparent' because if used properly, it is very difficult to make management decisions that preference the provision of one set of values over another. To better explain this concept, I have outlined a practical example below.

As noted by interview respondents, a number of individuals and groups who are concerned with the protection of fish populations do not buy-off on PFC as an assessment method (as a result they do not buy-off on it as a communication tool either). Recently (November 2002), the Society for Conservation Biology (Colorado Plateau Chapter unveiled a new set of assessment guidelines (entitled the 'alternative PFC protocol') that incorporates ecological indicators for monitoring fish habitat (among other things). As part of the 'roll-out' of this new method, the Society sent a letter to the NRST requesting that they reformat the PFC tool. The Society also informed the NRST of their plans to lobby the BLM and USFS to incorporate these new guidelines into their riparian programs.

As pointed out by numerous PFC supporters, it is obvious that this group does not support the collaborative mission of the riparian initiative, nor do they define 'appropriate role of science' in the same manner. Like the dialogic model, supporters of the riparian initiative and the PFC tool believe that the appropriate role of science is to structure the debate in such a way that individuals can have equal access to technically complex information. Once a shared understanding is developed, equally informed participants are then able to challenge their opponents' assumptions and world-views. Supporters of PFC argue that this tool provides a good means for structuring this debate because it makes information easily accessible to affected stakeholders who are non-technically trained. Reliance on a short, visual assessment (which is not as time or equipment intensive as other more quantitative assessment methods) aids in making this assessment accessible to a wide range of stakeholders. This tradeoff is made initially (intensive efforts aimed at gathering additional information can always be conducted later on in the

process) in order to establish a foundation upon which to build a long-term dialogue about the proper management of specific systems.

Additionally, PFC supporters note that the reliance on an assessment process that focuses on physical function rather than one based on pre-determined management objectives (e.g., fish habitat), helps maintain a transparent decision-making process. The decision to assess streams based on ecological indicators regarding fish habitat is in effect a management decision, one whose risks, tradeoffs, benefits and costs have not been negotiated by the group of affected stakeholders. Rather, it is a management decision that has been made by scientists with little regard for the manner in which the costs and benefits associated with such a decision are distributed across individuals and groups. In this scenario, the 'science' is not used to structure a dialogue about the desired future condition of an area. Rather, the science itself serves as a structure that privileges the development of management objectives that are focused on fish habitat because it is imbedded within the assessment method. As previously noted, supporters of PFC do not believe that this reflects an appropriate use of science within collaborative processes. In other words, the 'alternative PFC protocol' is aimed at a different objective that the PFC tool – one that is not consistent with the tenets of a dialogic model.

Once individuals and groups have decided that they agree with the assumptions underlying PFC, a focus on the physical functioning of riparian areas has demonstrated success in terms of moving groups beyond conflict. However, some individuals and groups remain hung-up on the use of PFC even though they agree with the underlying assumptions. As a number of interview respondents pointed out, the riparian initiative has historically been closely linked with the PFC assessment method. However, since the

PFC tool is also used to varying degrees within the BLM and the USFS it has developed a 'life of its own.' Some people like it, some people hate it. Some people have seen it used properly, others improperly. Some people do not like PFC because of the manner in which it was 'adopted' by an agency, others do not like it because they have seen it used as a hammer rather than a communication tool.

In light of these mixed feelings regarding PFC, many people are turned off by the riparian initiative simply based on its association with this method. That is not to say that it is not a valid and worthwhile method that should be used whenever the opportunity presents itself; rather, it is to say that the group's decision to use PFC cannot be forced. In order to increase effectiveness and stakeholder receptivity in these circumstances, the NRST must work to lessen its association with PFC and maintain their focus on facilitating cooperative riparian management through the creation of a shared understanding of riparian function (deals with the 'over' commitment issue raised in the interviews). Based on evaluation results, the NRST has become more aware of the importance of communicating their willingness to work with groups even if they decide to use a method other than PFC (as long as there is agreement on underlying assumptions addressed above). The NRST recently demonstrated this commitment during the revision of its strategic plan, which deliberately constructs PFC as one tool employed by the riparian initiative rather than the only tool.

Field-Based, Collaborative Learning

Another way that the approach (tools and processes) used by initiative implementers reflects the tenets of the dialogic model is in its creation of opportunities

for mutual leaning (Table 31). In addition to the use of PFC, both service trips and PFC workshops rely on field-based, collaborative learning among stakeholders representing diverse interests. In short, the approach is designed to increase individuals' understanding of riparian function, as well as build relationships. Within service trips, these circumstances present themselves as groups work together to assess riparian condition (identify problem) and develop alternative solutions. Since the PFC workshop is not designed to solve an identifiable on-the-ground problem, opportunities for field-based, collaborative learning must be created. This is often done through deliberate efforts to break the large audience into smaller 'interdisciplinary' groups for conducting field-based assessments.

Reflecting the tenets of the dialogic model, this approach provides a means for equalizing access to scientific and technical information, which, in turn, enables participants to challenge the claims of competing interests. Additionally, the manner in which such information is assembled (joint fact-finding) builds both relationships between individuals and group ownership in the information. According to Wondolleck and Yaffee (2000), joint-fact finding represents a critical component of successful collaborative efforts. "Joint fact-finding not only resolves key areas of uncertainty, it also strengthens personal relationships among participants in a collaborative effort" (Wondolleck & Yaffee 2000:29). In addition, the information that is gathered becomes part of shared knowledge base necessary for solving the problem that is owned by all the members of the collaborative group (Wondolleck & Yafee 2000).

According to a recent study conducted by Smith (2002), conflict resolution and collaboration is easier when participants in the decision-making process have developed

relationships through interpersonal interaction. Smith (2002) posits that such interaction results in the development of mutual respect, an understanding of each other's interests and perspectives, and a sense of connection (social bond), which are often necessary to resolve conflicts and work collaboratively. In order to construct situations in which this type of relationship building can occur, it is important to consider the nature (or characteristics) of the interaction.

Smith (2002) argues that in addition to facilitating in-depth discussions and creating opportunities for joint learning, it is also important to incorporate conflict management techniques and consider the physical and social setting in which these interactions take place. Specifically, Smith (2002) notes that it is important to construct the process and setting of citizen participation in a way that lessens the feeling of 'distance' between individuals. For instance, do the seating arrangements separate decision-makers or technical experts from the rest of the audience? Are other status symbols present, which work to reinforce this physical separation? Do the procedural guidelines regarding who can speak differ between decision-makers or technical experts and participants?

Considering these questions in relation to the riparian initiative, the answers are different regarding classroom and field portions of the service trips and PFC workshops. Within the classroom portion, instructors generally stand in the front of the room and lecture to the audience. Discussions occur in a typical question and answer format. Thus, the classroom setting does not lend itself to facilitating the type of interpersonal interaction described by Smith (2002). However, the setting of the field session is markedly different. As previously noted, participants work within smaller groups to

conduct on-the-ground riparian-wetland assessments, which allows for high levels of interpersonal interaction. Furthermore, field-based discussions within the large group are typically conducted in more of an informal manner with little physical or social separation between decision-makers or technical experts (instructors) and the rest of the group.

In response to the evaluation results, the NRST has begun to incorporate a number of consensus building techniques within the classroom portions of service trips to increase their effectiveness in terms of facilitating interpersonal interaction. In some instances, the team has contracted a meeting facilitator to lead these classroom exercises. The use of a designated meeting facilitator has enabled team members to participate in the small discussion groups (typically in seated in a circle), thereby increasing their interaction with participants. The reliance on consensus building techniques has not only increased and diversified the nature of the discussions between participants, it has also created a setting that allows for equal participation by all individuals. In other words, under the new format, classroom discussions are less likely to be dominated by a few 'loud' individuals.

Additionally, the use of a 'neutral' facilitator and the reliance on a process that ensure everyone has an opportunity to speak and be listened to with respect has helped to alleviate some of the potential problems identified by some interview respondents regarding the 'high powered' reputation of the NRST. The NRST also works to address this issue by encouraging the participation of co-instructors who are not directly linked to the NRST. Encouraging the participation of other network members not only helps

develop the capacity or skill-base on individual network members, but also provides participants with other contacts who may seem less intimidating.

In addition to simply creating situations in which interpersonal interaction can occur on a one-time basis, Smith (2002) argues that successful conflict resolution and collaboration requires the maintenance of close relationships over time. Sustained participation is central to the dialogic model of collaboration as well. Although this is an important component of successful collaborative efforts, the maintenance of long-term relationships within various groups currently falls outside of the purview of NRST activities. However, recognizing the importance of long-term relationship building to the success of cooperative riparian management efforts, the NRST is working to develop a network of people who are able to help facilitate such efforts. In response to evaluation results, the NRST has begun to work with the Consensus Institute and the U.S. Institute for Environmental Conflict Resolution. Furthermore, three of the seven NRST members have been trained in meeting facilitation and consensus building. This year, the NRST also nominated and sponsored (paid expenses) five network members to participate in this training.

Link Local Action to Larger Power Structures

Build Individual, Community and Institutional Capacity

The previous sections addressed the riparian initiative in terms of the manner in which the nature of the public interest is viewed by implementers and their ability to

create a forum for housing a dialogic model of rationality. As previously noted, supporters of the dialogic model argue that in addition to encouraging dialogue, it is also important to link local action to larger political, economic and technical resources. One way in which the riparian initiative works to support grassroots efforts is through the provision of capacity building activities (Table 31). By its very nature, the riparian initiative works to develop human capital within communities and institutions. The development of human capital comes in the form of education opportunities, and is necessary to ensure to the production of innovative ideas and designs (Fulton 1997). Unlike most educational campaigns or technology transfer teams, however, the riparian initiative is also designed to increase social capital through mutual learning and relationship building.

Traditionally, most of the service associated with the riparian initiative were generally a one-time intervention. However, evaluation results indicate that, in order to be effective, capacity-building efforts must occur over the long-term and will be different for different groups. In response to this, the NRST is in the process of developing a follow-up protocol for service trips. Upon completion of service trips activities additional contact will be made by service trip coordinators in an effort to determine group progress and identify any needed assistance. The NRST will provide additional services when appropriate and direct trip coordinators to alternative forms of assistance when necessary. It is hoped that an increased focus on follow-up activities will help groups maintain momentum in terms of continuing dialogue, working through planning phases and addressing the material constraints associated with implementing various management changes on the ground.

Beyond providing additional services to clients, the NRST is also engaged in activities designed to increase the capacity of its network members (as well as interested community leaders). Specifically, the NRST has recently developed or sponsored training activities in riparian management (grazing, roads) and monitoring, consensus building, grant writing and strategic planning. It is hoped through such sessions, network members will develop the capacity to provide more effective and relevant assistance to local working groups.

Network as Structure for Supporting Local Action

In addition to specific implementation activities designed to support local action (e.g., capacity building efforts), the creation of the riparian initiative itself represents an effort on the part of federal natural resource agencies to equalize power at local level by working to involve those most affected by riparian-related decisions. As previously noted, Williams and Matheny (1995) contend that an important role of the Federal government within the dialogic model of decision making is to assist individuals and groups in overcoming obstacles to organization, information gathering and understanding, and effective participation. In other words, one of the important responsibilities of the federal government is to provide top-down support (through legislative mandates and structural transformations) for the often ad hoc process of local problem solving and decision-making (John & Mlay 1999, Williams & Mathney 1995).

In many ways, the riparian initiative represents an outward manifestation of Federal support (administrative mandates and allocation of budgetary and staff resources) for cooperative riparian restoration and management activities organized around a place.

Specifically, the riparian initiative provides a mechanism whereby the federal government can participate in the formation of stakeholder groups, and lend the expertise of its technical staffs to assist groups in gathering and understanding technical information. As the riparian initiative continues to evolve, federal support will also include capacity building efforts such as training in consensus building, grant writing and strategic planning.

As part of the riparian initiative, the extended riparian coordination network was also created. In many ways, the network is designed to function as an institutional structure for coordinating interagency activities and bringing the government closer to the people. As previously noted, the riparian network is composed primarily of agency employees who work at either the field, regional or national levels of the federal agencies. The main objective of the network is to integrate the riparian initiative across ownerships and organizational levels in order to establish a foundation of support within the agencies for place-based, cooperative riparian restoration and management efforts. This 'foundation of support' can be characterized as a newly created bureau evolving within three parent bureaucracies (BLM, USFS and NRCS). Consistent with the tenets of the dialogic model, this new bureau (or institutional structure) is designed to link grassroots action to existing political, economic and technical resources present within federal agencies.

Although the dialogic model highlights the importance of linking local action to larger power structures, the manner in which such institutions can be created and sustained is not addressed within Williams and Matheny's (1995) discussion of the dialogic model. Consideration of this issue requires an examination of a new body of

literature. For the remainder of this discussion, I consider the riparian network as a new bureau in order to provide a framework for better understanding the nature of this component of the riparian initiative. In discussing the life cycle of bureaucracies, Downs (1967:5) notes that they all develop in the following manner:

> the bureau is initially dominated either by advocates or zealots, it normally goes through an early phase of rapid growth, and it must immediately begin seeking sources of external support in order to survive.

Specifically, Downs (1967:6) states,

> when a group of zealots somehow conceive a new function they believe their bureau should undertake, they form a nucleus agitating for change. Enthused by their idea, they persuade their superiors to give them some resources and manpower to develop it. If their efforts prove successful, they gradually enlarge their operations. For these operations to generate a new bureau, they must be technically distinct from the other activities of the parent bureau. As the practicioners of the new specialty become more immersed in it, their terminology, interests, and even policy outlooks become more unlike those of the remainder of the parent bureau. Hence a growing conflict usually springs up between these two groups. The new specialists eventually become convinced that they cannot fully exploit the potentialities of their operations within the parent bureau. This marks a critical stage in the life of the new section. It can either be suppressed by traditionalists, or be successful in breaking off into a new bureau. The key factor is the amount of support the new section generates outside the bureau. If the new section's leaders can establish a strong clientele or power base beyond the control of their immediate supervisors, then they have some leverage in agitating for relative autonomy. In some cases, they will establish autonomy very quickly; in others it will take years of struggle and a strong push from the external environment.

After reviewing the historical development of the riparian initiative, it seems that the initiative was created in a manner similar to that described above. Additionally, the riparian initiative is currently facing many of the same problems that new bureaus face. As previously noted, the riparian initiative was initially supported (at least politically) at the upper echelons of the three agencies. As a result, they established autonomy quickly.

However, their initial sources of political and financial support were scattered. Given the nature of the bureaucracies within which the initiative is housed, the high-ranking individuals who offered initial sources of political and financial support have since left the agencies and the riparian initiative has 'lost their connections to the brass.' In order to attain their "minimum survival threshold" (where threats to survival no longer pose a concern), the riparian initiative must develop more consistent and reliable sources of political and financial support (Downs 1967:8-9). In other words they must demonstrate the value of their services, in order to motivate users to support it. As Downs (1967:8) notes,

> Once the users of the bureau's services have become convinced of their gains from it, and have developed routinized relations with it (institutionalization), the new bureau can rely upon a certain amount of inertia to keep on generating the external support it needs. But in the initial stages of life, it must concentrate on developing these 'automatic' support generators. This critical drive for autonomy will determine whether or not it will survive in the long run.

For all intents and purposes this is the stage in which the riparian initiative currently finds itself. They are now trying to establish 'automatic support generators' within the three agencies, beyond simply relying on the support of top level political officials within the agencies. However, as previously discussed, they have been having a hard time. It is important to remember that network members are truly more interested in performing the social function of the riparian initiative, rather than focusing solely on survival for survival's sake, but they recognize that survival comes first.

In my opinion, there are two reasons why the riparian initiative has been hard pressed to develop "automatic support generators" within the agency. First, they are a

“fledgling bureau” (Downs 1967:9). According to Downs (1967:9) fledging bureaus are “most vulnerable to annihilation by its enemies immediately before it attains its initial survival threshold” because it “has not yet generated enough external support to resist severe attacks.” As Downs (1967) point out new bureaus have both functional and allocation rivals or “enemies” (within and outside the parent bureaus). Functional rivals refer to those agencies whose social functions are competitive with those of the new bureau, while allocation rivals refer to other agencies that compete with it for resources. Following this, it is reasonable to assume that a percentage of individuals who criticize PFC do so because they are competing (functional or allocational rivals) with PFC or the riparian initiative. For instance, individuals or groups who have created their own riparian-wetland assessment methods have an incentive to criticize PFC in an attempt to showcase and gain support for their tools.

The other reason why I think the riparian initiative has been hard pressed to develop automatic support generators within its parent agencies is because it is currently in a double bind, or a catch-22. As noted in chapter six, in order to be successful, the riparian initiative requires a high level of commitment from individual network members, as well as networking, experience and personality characteristics that are often different from their other job responsibilities. However, in addition to obtaining a commitment from network members themselves, the success of the riparian initiative also requires commitment (granting employees the time and financial resources needed to effectively participate in the riparian initiative) from their employers (both the institution and supervisors). This is the case because for most network members, except the NRST, participation in the riparian initiative (implementers) is a responsibility that is added on to

their existing job responsibilities. Although support at the institutional level is an important determinant of success, the three sponsoring agencies have historically demonstrated differing levels of political and financial support. Furthermore, the very structure of government bureaucracies presents a barrier to the success of the riparian initiative because they generally do not support innovation and risk taking that is required within the riparian initiative. Additionally, the institutional environment itself is characterized by shifting priorities and a preference for quantitative information, which is often at odds with the collaborative mission of the riparian initiative.

Returning to the double-bind, or catch-22, in which the riparian initiative currently finds itself, the riparian initiative needs external support in order to survive. In order to obtain such support they must demonstrate that they are providing a worthwhile service. However, they are currently unable to demonstrate success to the extent hoped for two reasons. First, the traditional methods or reporting measures used by parent agencies to demonstrate success are not adequate measures of the integrated services provided by the riparian initiative. Second, in order to achieve (and demonstrate) success the riparian initiative must have a functioning network; however, network function is directly linked to the existence of reliable sources of political and budgetary support.

One of the reasons why the riparian initiative has had a difficult time generating support within their parent bureaucracies is that accepted methods for measuring the success of the riparian initiative do not exist. Thus, existing reporting requirements, which are used to keep track of how employees spend their time and provide a rationale for allocating financial resources to certain programs and program areas, do not encourage the type of employee behaviors needed to ensure the success of the riparian

initiative. For instance, agencies currently determine successful riparian management based on the number of stream miles currently assessed and the percentage in proper functioning condition. Less consideration has been given to reporting either the manner in which condition ratings were determined or indicators of improvements in riparian health. As a result, it is difficult to report the effectiveness of management changes that are designed to improve riparian health over the long-term (a primary objective of service trips). Additionally, agencies currently do not have methods for reporting the non-market values provided by functioning riparian-wetland areas, nor do they have ways of assessing the economic impacts associated with cumulative ecological effects or management changes across a large-scale (e.g., how logging, mining or other resource management practices in Arizona impact the costs that are later borne by Californians who must treat that water prior to human consumption).

In addition to limited riparian measures, most agencies have not developed adequate measures regarding effective communication and collaboration. Although most agencies espouse the need for collaboration, a review of BLM, USFS and NRCS' strategic plans indicated that process and outcome objectives and measures have yet to be developed. As a result, it is very difficult to demonstrate effectiveness in these areas. This is problematic because employees must devote large amounts of time to participation in collaborative processes; however, there is no mechanism (beyond measuring customer satisfaction) for reporting the benefits attained from the use of employee time in such a manner.

Currently agencies rely solely on measures of customer satisfaction as a means for assessing agency and non-agency interaction. For instance, the *National Partnership for*

Reinventing Government was initiated by Al Gore in the 1990s to address the lack of trust that current exists between the American people and their government (BLM 2000). As part of this initiative, 32 *reinvention impact centers* were identified (including USFS and BLM) because of their high levels of interaction with the public (BLM 2000). These centers were challenged to develop goals that result in a meaningful, noticeable improvement in customer service (BLM 2000). Although improved customer service is a worthwhile objective, as noted in chapter five, high levels of customer satisfaction do not necessarily equate to improvements (cooperative riparian restoration and management) on the ground. According to interview respondents, measures must also be created to reflect increases in participant understanding, improvements in communication and cooperation, and the development of individual, community and institutional capacity for addressing future problems.

The second reason why the riparian initiative has had a difficult time generating support within their parent bureaucracies is because they cannot demonstrate large-scale success on the ground (although they have demonstrated notable success on a case-by-case basis), because their activities are currently constrained by a lack of political and financial support across the three sponsoring agencies. Most instances of on-the-ground success are linked to service trips and the NRST. As noted in chapter six, this is because the NRST is able to commit additional time to engaging traditionally unwilling participants, and they are able to create environments that foster ownership and group problem solving.

Cadre activities, on the other hand, are typically limited to providing PFC workshops (or educational campaigns). Although these sessions help improve

understanding, communication and relationship building during the workshops, it is less evident that this is maintained post-session because a specific problem is not being addressed. Furthermore, instances where cooperative riparian management does occur as a result of PFC workshops are generally linked to interdisciplinary planning processes within an agency rather than problems solving activities involving a diverse range of stakeholders.

Although sponsoring PFC workshops is the implementation activity that most cadres focus on, it is not the only activity. As previously noted, the 13 cadres (including B.C.) demonstrate varying degrees of success. Cadres that are comprised of members that have either obtained supervisor support or solicited financial support through other activities (e.g., grant writing, or charging consulting fees) have been engaged in numerous activities beyond simply sponsoring PFC workshops. For instance, a number of cadres have partnered with other organizations (e.g., Cattleman's Association, Nature Conservancy) to host sessions designed to address specific management and monitoring concerns.

Additionally, the Canadian cadre, which is comprised of three private consultants, has spent most of their time engaged in service trips. Like the NRST, cadre members devote some time to educating diverse participants (all necessary stakeholders) on the physical functioning of streams and the PFC tool. However, they, like the NRST, move a group beyond the PFC assessment and into the problem-solving realm. Specifically, the Canadian cadre has participated in the development of cooperative riparian-wetland management plans designed to ensure stable supplies of high quality drinking water for the city of Cranbrook and the Whistler Resort. They also met with the Olympic Bid

Committee in an attempt to 'market' Whistler's 2010 Olympic bid with PFC as one of its selling points. Additionally, they have participated in the design of real estate development plans (suburban housing developments and industrial parks) created to ensure the proper functioning condition of surrounding streams. They have also met with the B.C. Premier's staff in an attempt to set Proper Functioning Condition as a provincial standard (e.g., legislative mandate that would rearrange the central relationships to promote environmentally sustainable behaviors at the local level). The Canadian cadre has also sponsored a number of information sharing activities regarding the riparian initiative and the PFC tool to audiences ranging from elementary school students to graduate students, as well as various community groups. Finally, they have recently submitted a proposal to present the riparian initiative's cooperative riparian philosophy to the New York City Watershed (which is one of the USFS' Community-Based Watershed Partnerships).

When these examples of on-the-ground success are combined with the case-by-case examples attributed to the NRST, it seems evident that the processes and tools advocated by the riparian initiative are capable of producing large-scale results if given the necessary institutional support (particularly financial resources). It is also evident that in order to address place-based riparian conflicts, the focus of services provided by the riparian network must extend beyond the promotion of an education/information campaign and work to assist groups in continuing dialogue, as well as addressing the material constraints that hinder on-the-ground management changes. However, the question remains: How can this be done when cadres members currently do not receive

enough support to effectively implement even an education/information campaign? In order to have a future, some how this initiative needs to navigate these tensions.

On the one hand, the riparian initiative must work to gain agency support. Although the initiative itself reflects the tenets of the dialogic-model of decision making, evaluation results indicate that the policy decisions that instituted this initiative were often not made using a dialogic policy process. As a result, there are a number of agency employees who do not have ownership in this decision and, therefore, do not support or participate in the riparian initiative. Evaluation results indicate that in order to gain agency support for the riparian initiative, efforts must be made to build ownership at the institutional level (within and across agencies). In response to these findings, the NRST is currently working to build ownership and support in a variety of ways. First, the NRST is currently working to formalize a Memorandum of Understanding (M.O.U.) between the three sponsoring agencies in an effort to demonstrate Washington Office political support for the riparian initiative and a commitment to allocate the financial resources necessary to effectively implement the initiative. It is important to note that an M.O.U. represents a formal agreement between the three sponsoring agencies, rather than the existing 'endorsement letter' that was signed only by the BLM and USFS in 1996.

Second, as previously noted, the NRST is working to develop support among individual managers via their newly designed 'PFC for Managers' workshop. This training session incorporates many of the tools and processes used with the PFC workshops and service trips; however, it is specifically targeted to managers. Participation is solicited from a range of agency (local, state, federal) managers, as well as key community leaders. Each of these sessions have been facilitated by an outside

facilitator, and have been designed to increase awareness of, skill development in and support for cooperative riparian management. The session itself focuses on both the social and technical aspects of riparian issues. For example, field sessions have been modified to include the consideration of alternative management outcomes from diverse perspectives. Frequently, the landowners and other key stakeholders who are or have been directly involved in the management of a specific area have presented their stories and concerns to participating managers.

As indicated in chapter six, one of the factors constraining the success of the riparian initiative is the fact that there has not been support for the initiative across middle managers. In my opinion, one of the reasons for this lack of support is the fact that the NRST targeted their initial efforts to 'market' the initiative specifically to field employees and high-ranking Washington Office employees. Considerably less time was devoted to working with program supervisors at either the Washington, regional or district levels. This presented a problem the formal communications system of bureaucracies has dsyfunctions. According to Roberston (1981:171),

> In theory, communications flow upward and downward through appropriate channels. In practice, communications flow almost entirely downward and are often distorted at the middle levels during the process.

Individuals who work within bureaucracies, including Jack Ward Thomas (retired USFS chief) often term the middle management level the 'impervious layer.' In order to 'get through' to employees at this level, it is important to communicate with them directly. This further highlights the point raised in chapter six, regarding the importance of building ownership across all layers of the organizational hierarchy. Recognizing that both top-down and bottom-up efforts at communicating within an organizational

hierarchy are subjected to dysfunction, we are left with the typical 'chicken or egg' scenario. How do we initiate agency or institutional change if we cannot communicate or dictate the need for change from either the bottom or the top of the hierarchy? First, agency employees must communicate innovative ideas with managers directly (as opposed to assuming they will trickle up or down). Second, top-level officials must initiate structural transformations to accompany administrative mandates if they wish to truly elicit agency change.

This latter point represents the second reason why I think the riparian initiative has been historically less well received by middle managers. Individual employees who are currently in management positions have gotten there because they are career-oriented. In other words, such employees anticipate a career with the agency and have advanced positions within organizational hierarchy on the basis of seniority or merit (or a combination of the two). As indicated in chapter two, given the formal structure of bureaucracy 'merit' awards are typically based on an individuals ability to demonstrate achievements in terms of following pre-set rules and procedures, and maintain organizational stability (rather than demonstrating ability to take risks and be innovative).

Given that middle managers typically represent career-oriented individuals, they are heavily influenced by the formal structure of an organization. Although demonstrations of political support (through administrative mandates) for an activity are important, they are typically not enough to influence the behaviors of career-oriented individuals. The reason for this is obvious, given the fact that the administrative mandates and priorities associated with a particular agency often change according to which political administration that is governing the U.S. The formal structure of a

bureaucracy, on the other hand, often remains the same. In other words, while administrative mandates and political support may come and go – the formal structure (e.g., rules, procedures, and budgets) remains. Thus, in order to change the behaviors of career-oriented individuals who are concerned with climbing the career ladder on the basis of merit (which is greatly influenced by the formal structure), structural transformations must follow administrative mandates.

Evaluation results indicate that such changes in agency structure, however, did not accompany the political support given to the riparian initiative. Even the BLM, which formally committed both political and financial support to the initiative, did not make the structural transformations need to ensure the success of the riparian initiative (e.g., continued preference for 'widget-based' reporting, and compartmentalized budgets separated by program areas). Furthermore, the funds that were allocated were directed to conducting PFC assessments on BLM land – not to promoting the principles and practices associated with the riparian initiative.

In response to these findings, and the need to increase agency support for the riparian initiative, the NRST is working to assist the structural transformation of the three sponsoring agencies by working to devise methods for demonstrating how the riparian initiative complements and strengthens existing programs. As part of this effort, the NRST is committed to assisting in the development of riparian-wetland program objectives and measures. Additionally, they plan to continue their evaluation process in an attempt to assist in agency efforts to identify process and outcome measures with regard to collaborative management activities. The creation of new reporting measures will not only help change existing rules and procedures, but will also help initiative

implementers secure reliable sources of political and financial support as they demonstrate effectiveness in terms of helping agency employees meet these new reporting requirements.

The NRST recognizes that such structural changes will be a long time coming. So, they are working in the interim to create products designed to capture and market the benefits of their services. For instance, they recently published 'A Progress Report on the Interagency Strategy for Accelerating Cooperative Riparian Restoration and Management' (September 2002). This report highlights 17 service trips (conducted in 14 states, plus Alaska, Canada and Mexico) and provides insight into the nature of the conflict, the stakeholders involved and on-the-ground results for each.

Finally, evaluation results indicate that in order to ensure its survival, the riparian initiative must be supported outside of the agencies as well. In response to this, the NRST is working to establish this support in two ways. First, the NRST is focused on developing partnership with non-agency organizations such as the Cattleman's Association, the Nature Conservancy, the Quivera Coalition, and Trout Unlimited to provide assistance to private landowners. The NRST is also working to expand their efforts to leverage resources.

Specifically, they are working to encourage network participation from diverse individuals (representing diverse affiliations and skills). Additionally, NRST members are working to develop their skills in strategic planning and grant writing in an effort to augment existing agency support. If the NRST was able to create a funding source of non-agency contributions, they would be in a better position to help finance the participation of network members (e.g., pay travel, salaries, training expenses, and

provide ‘scholarships’ for network members to participate in their own skill development). In turn, network members would be better able to actively participate in various implementation activities associated with the riparian initiative, including but not limited to PFC workshops. Additionally, with non-agency (particularly BLM and USFS) funds the NRST would be in \a better position to assist private landowners in terms of hosting workshops specifically for private landowners and working to implement management changes on private land (help land managers with supply or labor costs, and possibly augment income loses).

One of the ways that the NRST is working to leverage additional financial resources is through the development of both a profit and non-profit, 501(c)3, arm of the initiative (in addition to the institutional arm). As part of this organization, a number of private consultants would work with private and public landowners on a for-profit basis. A percentage of this profit would then be allocated to the non-profit portion of the initiative (this money would augment existing supplies of grant or foundation money). The non-profit arm would be legally recognized as a 501(c)3 organization, which would allow individuals working on site-specific projects to apply for grant money under this umbrella foundation and it would enable the NRST to direct existing financial resources to assist individual landowners or groups with project costs (e.g., supplies and staff to assist with meetings and management). Critical to obtaining private funds through grant and foundation sources will be a consideration of the economic costs and benefits obtained through various activities (or associated with non-action).

Future Research

With regard to future research, two important findings were uncovered during this first round of evaluation efforts for the riparian initiative. First, a fifth dimension of 'quality services' was identified through an analysis of the interviews. As noted in chapter five, this study relied on four measures of 'quality services' including quantity of people reached, customer satisfaction, increased knowledge, and diverse participation. However, interview respondents often linked success to the creation of environments that foster individual ownership in the decision to participate in cooperative riparian restoration and management efforts. Subsequent evaluation efforts will be focused on developing a better understanding of this ownership as a construct (How design workshops and consulting services to create ownership? How is ownership linked to power – or how do benefits and costs influence ownership?) and operationalizing this construct through the creation of measurement instruments.

The second important finding, with regard to future research, that was uncovered during this first round of evaluation efforts was the importance of agency support. Based on the results of this evaluation, agency support seems to be one of the primary factors limiting the success of the riparian initiative. This finding, like the one above, emerged out of an analysis of the interviews. During this first round of evaluation efforts, attention was devoted primarily to documenting the success of implementation efforts. Specifically, the following dimensions of success were identified: the existence of a functioning network, the achievement of increased awareness, the provision of quality services, and evidence that participants have adopted initiative principles and practices. However, my study findings indicate that another important dimension of success is

whether an agency initiative has reached its 'minimum survival threshold,' and what structural transformations must occur for this to be realized. Subsequent evaluation efforts will focus on exploring and measuring this additional dimension of success as well.

Unlike the first round of evaluations, which relied on simple random sampling techniques to select potential PFC workshop survey respondents, subsequent evaluation efforts should rely on stratified sampling techniques to ensure that a diversity of perceptions are captured. Furthermore, future interview respondents should include 'clients' as well as implementers.

In addition to outlining research objectives to be addressed as part of a second round of evaluation efforts (new literature review, new data collection efforts), there are also a number of research questions that can be addressed through additional analysis of the existing data. In order to obtain a more complete picture of the nature of the riparian initiative and the context within which it operates, additional factors that are important determinants of success can be explored. Specifically, community level factors such as the size and type of community, the existence of social networks, and historical relationships between individuals and groups can be explored. Process characteristics can also be examined such as the physical and social setting of implementation efforts, and mechanisms for addressing different types of conflicts.

Another set of research questions that could be addressed via additional analysis on existing data relates to how the existing power structures impact the success of collaborative efforts. For instance, how does the fact that our current political culture (U.S. and institutional) typically privileges competition over cooperation? Or, how does

the fact that our university system works to maintain disciplinary divisions and ‘train arrogance’ influence the success of collaboration? Finally, it is important to consider the costs and benefits associated with collaborative riparian management efforts, how are they distributed among certain individuals and groups, and how this distribution affects both the process and its outcomes.

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Appendices

NRST First Interview Guide:

1. Could you please provide some historical background regarding your experience with riparian management in general and the evolution of the NRST specifically?
    a. Expand on the historical development of riparian management?
        - Why, do you think, the NRST developed (historical context)?
        - What were the shortcomings of past riparian management models/strategies/techniques?
    b. How did the NRST develop?
        - Was it a top-down or bottom-up initiative, or both?
        - Who were the integral players in the development of the NRST?
        - What was the motivation behind the development of the NRST?

2. In your own words, please describe the NRST's goals?
    a. What criteria do you use to evaluate the success of this effort?
        -Expand on each of the criteria mentioned?

3. Describe/explain the process/model used to reach the goals outlined in Q#2?
    a. How does the program operate?
        -Who are the players, and what are their respective roles?

4. Do you feel that the process/model developed/employed by the NRST has been successful?
    a. If yes...
        -Please cite specific examples.
            - What factors, do you believe, have had the most influence on the success of the NRST?
    b. If no...
        - What factors, do you believe, have been/presented the biggest barriers?

5. Various land management agencies are showing a heightened interest in establishing new management models (e.g., increased public involvement, the Unified Federal Policy). Given your experiences with the NRST, what input/advice would you provide agency leaders regarding the implementation of such a plan?

6. Are there any other relevant topics/information, which I may have overlooked, that you feel warrant discussion?

Network Interview Guide:

1. Could you please describe your relationship/connection to riparian management in general, and the *Interagency Strategy for Accelerating Cooperative Riparian Restoration and Management* specifically?
    a. What year did you become involved with the 'Riparian Network'?
    b. What is your role/responsibility?
    c. What was your primary motivation for participating in this network?
    d. What has your annual time commitment been to this program?
    e. Does your participation fall outside of your official job duties?
        -If so, is your supervisor supportive of your participation in this network?

2. Describe the goals/objectives of the 'Riparian Network' or the Initiative, and the process used to meet these goals.
    a. How does the program operate?
        -Who are the players, and what are their respective roles/responsibilities?
    b. What criteria would you use to evaluate the success of this effort?
        - Expand on each of the criteria mentioned.
    c. How has the Initiative, the goals or the process used to reach these goals evolved since your involvement?

3. What are the on-the-ground results of this Initiative?
    a. Do you feel the initiative has been successful?
    b. How are the participants affected?
        - How successful has the initiative been at changing public consciousness with regard to the management of riparian areas (PFC as an assessment/management tool - functionality)?
        - How successful has the initiative been at accelerating cooperative riparian management (PFC as a communication tool)?
            - Has people's knowledge about riparian areas increased?
            - Does PFC aid in the creation of a common vocabulary that helps people set aside their values?
            - Have cooperative relationships been established, or improved?
            -Have riparian assessments/management strategies been completed in your area as a result of this program?
                - How many miles?
                - Who owns the lands?
                - How were the assessments completed, or management strategies designed?
                - Who was involved?

c. How have you been affected?
- Are you better able to assess riparian areas and develop mgmt. plans?
- Do you view or value riparian areas differently?
- Are you more apt to participate in collaborative decision making?
- Have your relationships improved?
- Have you been involved in, or provided opportunities for collaboration?

4. Given the various political, institutional and economic situations in which this initiative is applied, what are its advantages and disadvantages?

a. What factors have had the most influence on the success of this initiative?
b. what factors have presented the biggest barriers?

5. What direction do you think the initiative should move in the future?

6. Various land management agencies are showing a heightened interest in establishing new management models (e.g., increased public involvement, the Unified Federal Policy). Given your experiences with the NRST, what input/advice would you provide agency leaders regarding the implementation of such a plan?

7. Are there any other relevant topics/information, which I may have overlooked, that you feel warrant discussion?

D.C. Interview Guide (didn't have as many probes because under time constraints)

1- How would you rate your knowledge or familiarity with the NRST and the Initiative for Accelerating Cooperative Riparian Restoration and Management?

2- When did you become involved with the initiative and the NRST? What is your role/responsibility?

3- Please address, to the best of your knowledge, the development of the initiative and the NRST?
   - What were the shortcomings of past riparian management models/strategies/ techniques that led to the creation of a new riparian initiative?
   - Who were the players that were integral to its development?
   - Was it a top down or bottom up initiative?

4- In your own words, please describe the goals of the initiative.

5- What criteria would you use to evaluate the success of this effort?

6- Do you feel that the initiative has been successful?
   - What factors, do you believe, have had the most influence on success?
   - What factors have presented the biggest barriers?

7- Federal land management agencies are showing a heightened interest in establishing new management and decision-making models (e.g., increased public participation, the Unified Federal Policy). In light of that, how do you see the ACCRM fitting into current and future agency agendas?
   - What direction do you think the initiative should move in the future?

8- Are there any other relevant topics/information, which I may have overlooked, that you feel warrant discussion?

Follow Up Telephone Survey:

Hi. My name is Laura Van Riper, and I'm calling because I'm conducting a follow-up for a survey that was sent out last September (2000). I would like to take a few minutes of your time to ask you a few questions.

1- Did you receive the survey entitled 'Proper Functioning Condition Workshop Participant Evaluation?'

2- Do you recall when you participated in the session, and where it was held?

3- What was your primary reason for attending the session?

4- Using a six-point scale (strongly disagree, somewhat disagree, slightly disagree, slightly agree, somewhat agree, strongly agree) could you please respond to the following two statements:
   a- PFC is a good tool for assessing riparian areas.
   b- PFC is a good tool for developing a common language between people with diverse interests.

5- Have you participated in a PFC assessment that was conducted by a journey-level, interdisciplinary team?

6- Have you participated in the design or implementation of cooperative restoration or management plans (designed to restore or maintain an area in PFC)?

7- In your opinion, what factors present the biggest barriers to cooperative riparian (watershed) restoration and management?

8- Are you employed? By whom?

9- Finally, in order to help me with future studies, I was hoping you could tell me why you didn't respond to the survey?