

# Outdoor Recreation in the New Century: Frameworks for Working Through the Challenges

Stephen F. McCool<sup>1</sup>  
Department of Society and Conservation  
The University of Montana  
Missoula, MT 59812

*Abstract* Recreation planning and management is confronted with a growing series of challenges emanating from fundamental shifts in social values and preferences, large scale demographic changes, development of new technologies, economic restructuring and new perspectives on public land governance and decision-making. These driving forces have lead to public land recreation management situations that can only be described as contentious and complex, with growing public scrutiny and demands for greater accountability. Combined with growing and diversifying demand for recreation, the stakes involved in public land management have increased dramatically. This paper argues that these forces have lead to a situation where the intellectual capital needed for recreation management decisions has risen, the requirement for frameworks to help managers “work through” complicated decisions has escalated, and the need for understanding the consequences of decisions to recreation opportunities has grown. Against a backdrop of declining decision-making and research capacity, what frameworks are available for working through decisions and how suitable are they?

Key Words: Recreation planning

## **Introduction**

Public lands play increasingly important roles in providing settings for recreation experiences and tourism development. While these lands have long afforded resource commodities, such as timber, grass and minerals, to supply local industries, while they often have served as the watersheds for community water supplies, and while they continue to function as habitat for a variety of plants and animals, recreation and tourism puts new responsibilities and demands on decision-makers. Tourism and recreation operate in somewhat different ways than resource commodities; aesthetics is an important component, but so is good habitat, clean air and pure water. Private developments that exploit public lands for recreation frequently occur off these lands, in communities and on adjacent parcels of land.

---

<sup>1</sup> Presentation at the 2005 Society of American Foresters National Convention, October 19-23, Fort Worth, TX. Address correspondence with the author at College of Forestry and Conservation, The University of Montana, Missoula, MT 59812. Email [smccool@forestry.umt.edu](mailto:smccool@forestry.umt.edu). The author acknowledges the insights and support of Research Social Scientists Roger N. Clark and George H. Stankey, USDA Forest Service, Pacific Northwest Research Station in generation of the ideas presented here.

A variety of driving forces and contextual changes (e.g., population growth, changing public values, evolving philosophies about governance) have led to an increasingly contentious decision-making environment for recreation, to decisions that are more complex, to situations where the stakes are higher, and to growing scrutiny and accountability in public land planning. Overlaid upon this messy situation is a rising lack of trust in the capability of the government to make decisions in the interest of the public it is supposed to serve. These characteristics suggest that analysis of proposals, strategic policy, and project planning must rely more upon frameworks and concepts that explicate decisions than in the past, partly to avoid unnecessary impacts, duplication and loss of opportunities, and partly to ensure the optimization of benefits flowing from public lands.

And while conceptual advances in land management, such as landscape ecology, coupled with technological improvements, such as GIS, provide a greater capability for *informing* decisions, these changes have often led to greater visibility of scientific uncertainty in those decisions. The consideration of longer time frames and larger spatial scales in decision analysis means we know less than before, and that there is greater argument over what we think we know. Too, the recognition embedded within such fields as landscape ecology that systems tend to be nonlinearly dynamic brings a certain ambiguity to the decision-making environment as well. These have converged to make it difficult for the public, to say nothing of the agency staff, to understand how decisions are made at precisely the moment in time when the public is demanding greater involvement in such decisions.

Recreation and tourism development are not immune from this situation. What once was perceived as a relatively “benign” use of public lands is often as controversial as the timber sales it has replaced. For example, large scale tourism developments are frequently accompanied by a litany of problematic social effects in addition to the noticeable environmental ones. Coupled with growing contentiousness over the values of public lands, decision-makers providing opportunities for recreation and tourism development are confronted with this increasing complexity and uncertainty about the consequences of their decisions, with a political climate that has raised the stakes involved in decisions, and with the need to scientifically justify plans and policies.

The result of this socially and scientifically turbulent environment is a growing need for frameworks and concepts that assist decision makers in assembling a set of informed alternatives and evaluating them. Concepts that are useful to decision makers are ones that help clarify conflict and opportunity and build understanding of choices and consequences. Useful frameworks are those that help decision makers “work through” these choices in a manner that allows technical expertise, scientific knowledge and public values and interests to be incorporated, assessed and used.

In this paper, I outline some of the issues and questions associated with the use of planning frameworks to resolve recreation management challenges on public lands in this context. The overall purpose is to create a better understanding of why the use of a framework to work through decisions is so important, particularly in a time of change,

complexity and uncertainty. In addition, I discuss some of criteria to consider when adopting a particular framework.

## **Public Lands and Recreation Planning Frameworks**

The provision of recreation on public lands within a dynamic, multidimensional and uncertain context is complex, challenging and fraught with potential misdirection and at the least surprises and unanticipated consequences. For example, increased demand that public lands provide commercialized recreation opportunities have lead to conceptualizing management as one of identifying a carrying capacity for recreation, and then allocating such capacity between commercial and public visitors. Such a simplistic representation of a complex problem (e.g., what opportunities to be provided, to whom, where, how and with what consequences) follows from a lack of the intellectual capital needed to properly frame and respond to the problem. As in other areas of resource management, ideologies may subtly influence the approaches managers take to such decisions about recreation and tourism.

The development of recreation and tourism frameworks has occurred in just the last 25 years. Such development was generally in response to specific planning and implementation issues, often derived out of formalized policy, such as the National Forest Management Act of 1976 or the General Authorities Act of 1978. However, these frameworks were also often initiated in response to problems and challenges that are somewhat different or evolved out of attempts to use a framework in situations for which it was not suitable. As Nilsen and Grant (1997) argue, the first step in determining suitability of frameworks is to “decide which questions they are seeking to answer”. For example, the Limits of Acceptable Change framework (Stankey et al. 1985) was developed in response to numerous failed attempts to establish recreational carrying capacities for components of the National Wilderness Preservation System.

A limited number of frameworks in this arena exist, and many have similar characteristics, but may have been developed in specific policy and administrative contexts that influences the particular elements or components involved. We note that several overviews and comparative analyses of recreation and tourism frameworks exist (Manning 2004; Moore, Smith, and Newsome 2003) . Each is helpful in familiarizing the reader with these frameworks; however, they are not directed toward understanding their usefulness in addressing the variety of issues confronting managers. These reviews also tend to focus on a narrow set of frameworks, primarily around the Recreation Opportunity Spectrum and Limits of Acceptable Change processes.

In this paper, I take a somewhat different course, laying out a functional description of what a recreation planning framework is, describing the criteria that would be needed to evaluate the suitability of a framework in a given situation, and proposing what conditions are needed to use a framework. While I mention the actual frameworks, they are not described here. The paper concludes with some observations about the future, the role of organizational capacity, and the some observations about how such frameworks are diffused through a bureaucratic organization.

There may be as many definitions of planning as there are planners, but probably the most wide spread approach to a definition of planning is that it is a process to both describe a desired and/or acceptable future and the “best” route to it—leaving open the definition of best. While other definitions range from “application of science to policy” to “linking knowledge to action” the one used here—see below--is probably the most widespread notion of the idea of planning.

Organizations plan for a number of reasons: to solve a problem, because they are told to do so, to reduce individual discretion, to maintain consistency, to control that which can be controlled and so on. These notions may have been useful in the days of stability and predictability (if there ever were those days), but in an era that is chaotic, dynamic and filled with uncertainty, such concepts of planning don’t seem to fit well. There are at least three weaknesses with those approaches to the idea of planning: (1) plans are built from assumptions, and therefore contain expectations about the future; those expectations, however, filter out important, contradictory information such that data challenging the validity of those assumptions may never be observed; (2) plans are contingencies, based on what we expect to occur, and thus limit our repertoire of potential actions should our expectations not be met and things change; and (3) planning processes presume that rational people, following the same process, will come to the same decisions; but in a world of complexity and uncertainty, such plans cannot accommodate the inevitable surprises and unexpected events that will occur (Weick and Sutcliff 2001).

The linear, unidirectional character of planning implied from the above is not well-suited for the contexts within which recreation management occurs, particularly in the western U.S. These settings are not only contentious, but are fluid as well, with shifting priorities, changing needs and evolving problems and challenges. Government bureaucracies are established in part to address routine and repetitive problems, those with well-tested procedures and agreement on goals, commonly known as tame problems. Contemporary recreation issues, such as exemplified in Table 1, represent conflicting goals, competing uses, and divergent views on recreation on public lands with few known or tested processes for addressing them. These situations represent messy situations.

Development of planning frameworks can be viewed as an evolving critique of the inadequacies of government procedures to address complex problems in contentious situations. Messy situations not only require systematic processes that explicate fundamental assumptions and perspectives but also those that incorporate differing value systems and types of knowledge. In this sense, planning can be viewed as an iterative, inclusive process where stakeholders and planners jointly frame issues, construct futures, and choose socially acceptable, efficient, equitable and effective pathways to those futures.

Given the above, frameworks that focus on allocation decisions for recreation and tourism serve to provide a systematic process in making those decisions such that managers are fully aware of the desired future they wish to attain, the alternative routes to the future and the consequences of those alternatives. In addition, these frameworks

provide the explicitness and feedback needed in a time of change, complexity and uncertainty.

Finally, recreation and tourism planning frameworks make decision-making more efficient by focusing attention to important elements of the political and social environment, more effective by gaining the public support that is needed for implementation, and more equitable by forcing consideration of who wins and who loses. In an overall sense, a framework increases the opportunities to practice the “mindfulness” Weick and Sutcliffe (2001) argue that is important to deal with the inevitable surprises occurring in an uncertain context.

### **What is a Planning Framework?**

A “framework” may be defined as a process involving a sequence of steps that leads managers and planners to explicate the particular issue. A “framework” in this sense does not necessarily lead to formulation of “the” answer to an issue, but provides the conceptual basis through which it may be successfully resolved. Frameworks are structures that enable us to apply critical thinking skills to a complex problem, they are not processes that can be simply followed without understanding their underlying rationale and conceptual underpinnings. Frameworks allow us to create deeper understanding of these issues by forcing us to explicate and “work through” the various dimensions of them. A recreation planning framework helps decision makers gain insight about the particular issue confronting them and then provides some guidance on how to address the issue.

More specifically, framework here is defined as a process that is focused on recreation consisting of a group of guidelines, propositions, or steps that help frame or define the problem, forcing explicit consideration of issues and consequences. We exclude from this definition various laws and regulations that prescribe particular processes or mechanistic formulae that lead to specific answers. Stankey and Clark (1996) suggest that an effective framework would: (1) identify trade-offs between provision of recreation opportunities with the resulting local economic impacts and protection of biodiversity values; (2) appreciate and address complexity (rather than suggest reductionistic approaches); and (3) accommodate the array of constituencies with interests in the specific area or issue.

### **What Criteria are Useful in Assessing the Suitability of a Planning Framework?**

Not all recreation frameworks are suitable for all issues confronting public land recreation. And there may yet be issues for which not suitable framework exists. Never the less, decision-makers must evaluate the suitability of a framework for a specific issue. Five criteria involved in assessing the suitability of a recreation and tourism framework.

A primary consideration is the *saliency* of the framework to the particular problem in a specific planning situation. Not all frameworks were designed to address all issues confronting public land recreation planners. Indeed, as shown in Table 1, a wide range of issues exist out there. Therefore, as a first step, a framework should provide a process for

working through the specific issue confronting managers. In particular, the framework should help clarify the issue and frame it appropriately.

The next set of criteria are adapted from (Brewer 1973). The framework should be *conceptually sound*, that is it should be based on the most current and appropriate science and theory. Use of the framework should be relatively easy to defend to one's peers. The framework should also meet certain *technical* criteria, that is, it should be easily translated into practice. One should be aware of the key knowledge, skills and abilities required to implement the framework and it should be within the capacity of the organization to implement the framework.

The framework must meet an *ethical* criterion as well, that is, it should identify who wins and who loses, the distributional consequences of a decision. Finally, the framework must be *pragmatic*, that is it must be both efficient (getting the biggest bang for the buck) and it must be effective, (it helps achieve larger goals, such as optimizing the flow of benefits from public lands).

### **What Frameworks are found in the Planner's Toolbox?**

A limited number of frameworks exist to assist public land recreation managers to address 21<sup>st</sup> century issues. These are listed in Table 2. The frameworks represent an evolution of not only how recreation issues on public lands are addressed but also in how they are framed. The purpose here is not to present each framework or evaluate them (see (Nilsen and Grant 1998) for a comparison), but rather to depict the issues associated with use of recreation planning frameworks.

Recreation planning issues have undergone a major evolution in how they are cast as represented by the continual development of new frameworks from the learning engendered by application of frameworks in the past. A primary example is the carrying capacity approach<sup>2</sup> to visitor impact management. Carrying capacity has often been viewed as the fundamental question underlying recreation management on public lands, and has been frequently defined as the amount of recreational use that can be sustained with degradation of the biophysical attributes of the area or the experience constructed by visitors (see McCool and Lime 2001 for a critique of recreational carrying capacity). Driven by a desire to manage impacts, managers have often sought the answer to the question "How many is too many?" Unfortunately, answers have been few.

Ultimately, the issue of carrying capacity is one of how the challenges of recreation management, use and impacts are framed. Too often, planners attempt to solve the wrong problem, solve solutions, or state the problem in such a way that it cannot be solved (Bardwell 1991). The concern about public land recreation and use is a set of doubts dealing with the amount and kind of impacts that are generated, the ability of a site or community to assimilate impacts, the acceptability of impacts--both social and biophysical--, the tradeoffs made under conditions of uncertainty, the ability of those

---

<sup>2</sup> I hesitate to include carrying capacity as a framework because it meets none of the criteria identified earlier, but it has nevertheless dominated recreation management for decades.

affected to participate in decisions, the institutional capacity to monitor and manage impacts over time, and the will of the political system to make often difficult and controversial decisions. This complex assortment of interacting issues cannot be successfully reduced to the question of "How many is too many?"

By reframing this question, we more closely get at the intention reflected in it: What are the desirable, appropriate or acceptable conditions for this region, area or tourism destination? Once that is decided, we can then discuss how different management practices meet the tests of efficiency, effectiveness and efficacy (Checkland and Scholes 1990) that are important criteria in evaluating resolutions to wicked problems.

Table 2 also shows the principal question addressed by each of the frameworks. Note how the frameworks differ significantly on this point, suggesting that each framework serves public land recreation managers in different ways and that each framework varies in its suitability in addressing current and anticipated issues.

### **Conditions needed to implement a recreation planning framework**

Of course the frameworks listed in Table 2 can only be implemented if a set of conditions are present in the agency considering using a framework. These are briefly discussed below.

The agency must have the *organizational will* to implement the framework in full. The frameworks listed in Table 2 consist of a sequence of steps, elements or components. Each of these is essential to successful completion of the framework, and thus resolution of the underlying problem. Often, I have been asked how can the framework be shortcut, that is steps dropped, indicators and standards borrowed from other areas and so on. While this might seem a good way to cut costs in the short run, planning frameworks are not about the short run—they are about learning, thinking about the future, engaging the public, and strategic analysis. Each step or element is included for a specific reason; dropping any out is counter to these values of planning. Thus, the organization most importantly must have the determination to complete the process.

Related to this condition is that the personnel involved cannot be rushed, careless, or distracted. They must have the time and resources to complete a planning process competently. This would require the organization to develop and make available the time needed to work through the challenges of a recreation issue.

Second, the organization needs the *technical capacity* to conduct the planning processes. By this, I mean the organization needs the personnel with the appropriate skills, some technical, some in public meeting facilitation. This means the organization must not only seek out trained individuals, but also engage in in-service training and continuing education to maintain an up-to-date work force.

Third, the process must be *inclusive* of differing values and systems of knowledge. Many decisions in recreation management are value judgments (Krumpe and McCool 1998)

and thus a full discussion of the values involved is essential to addressing recreation management problems. This can only be done with inclusive public engagement processes because technical planners cannot be expected to equitably represent every value system. In addition, there must be recognition that different forms of knowledge (e.g., experiential, scientific) are not only legitimate ways of knowing but each contributes constructively at varying points in a planning process.

Fourth, the process must be *open and deliberative*, with opportunities to express, challenge and debate varying assumptions underlying proposed actions and goals. The planning process must therefore secure safe and accessible venues, ones that symbolize equality of access and so on.

Fifth, the process should focus on *effectiveness* of the framework not efficiency. Here, I mean that attempting to keep costs low should be viewed within the context of what needs to be done. Often, for example, public engagement is viewed as an “added cost” for public land planners and meetings are often perceived as simply a means of collecting data about public preferences.

Finally, these frameworks will purpose most effectively when we think at the *systems level*. Systems thinking involves considering relationships across time, space and function.

## **Conclusion**

Managers of public land recreation operate in a complex, dynamic and messy environment, where competing goals and a lack of science challenge their ability to frame problems and develop responses. Frameworks help managers work through these problems by structuring thinking processes, explicating assumptions and values, and forcing consideration of a range of consequences, interests, and alternatives. Frameworks help managers gain useful insight and frame an issue or problem in productive ways. The implementation of a framework in any specific situation is predicated on the presence of a number of organizational, personal and technical conditions. Of primary importance is the organizational will to implement and competently complete a particular framework.

If a framework can be viewed as an innovation, then adoption of this innovation follows a certain, and generally predictable, path (Rogers 1995). Rogers argues that the adoption of an innovation by a member (say a manager) of a social system depends heavily on the decisions of other members of the social (managerial) system. We expand this to include the *experience* of other members of the system with the particular innovation. The close collaboration of scientists and managers that typified the development of the ROS and LAC frameworks allowed managers to adopt the innovation in small steps, and with the support of scientists.

Positive experiences of other members of the social system (in Rogers’ language, innovators and early adopters) provide the confirmation that the innovation will enhance a person’s ability to function effectively. Such experiences reduce the risk of adopting an

innovation and then it failing. This process certainly occurred with the Limits of Acceptable Change system following its use in the Bob Marshall Wilderness in the mid-1980s. Other managers, once they heard of the use of LAC there, frequently called and asked for information, why the process was successful and for help in adopting it for their own areas.

ROS was successful because it helped managers understand and integrate recreation into decisions in a multiple use situation. LAC succeeded because it helped managers structure their thinking about the trade-offs between partially conflicting goals. BBM has not been widely adopted, despite concerted efforts, probably because of the complexity with which it is often portrayed. If managers do not understand an innovation, it is unlikely they will adopt it.

However, innovations and bureaucracies are polar opposites. Bureaucracies, such as land management agencies, are established to deal with routine problems and issues. Land management agencies are notoriously conservative, with a top-down command and control structure. In these situations, innovations are anything but routine and are slow to come. Diffusion strategies must emphasize, Rogers argues, the compatibility of the innovation with existing agency norms and policies.

While this paper has described the frameworks of the past, the paper itself is ultimately about the future, about the issues and challenges the new century poses and the capability of public land agencies to respond to them. There is no question that the land management organizations are experiencing an era of declining capacity. This decline is measured in terms of both the managerial proficiency (and the community of practice in Williams' words) available to sustain recreation opportunities and the scientific expertise needed to support the information requirements good stewardship requires. The loss of both types of capacity has long term consequences to the ability of an organization to respond to evolving issues and challenges.

Successful framework applications have occurred as a result of close, continuing collaboration between managers and scientists. Such collaboration allows managers to communicate issues and mandates clearer to scientists, scientists can query managers and come to a better understanding of the job at hand, and as a result develop applications, concepts and processes that are more useful to managers. Approaches to recreation and tourism development issues that have not involved this collaboration, in general, have not had widespread application. Given declines in both types of capacity, one can only wonder if public land recreation management agencies contain the capacity to address the issues of the new century. Undoubtedly, if the response is "no", the public eventually will demand changes in agency budgets, priorities and mandates.

Given the complex, contentious and changing environment in which recreation and tourism development decisions are being made, there is a need to continually understand the strengths and weaknesses of these frameworks, to monitor the situations in which they work or don't work, and to periodically make changes in how they are implemented. Use of pseudo-frameworks such as recreation carrying capacity not only miscast a

particular issue, but results in a loss of scarce planning resources when managers confront the unresolved issue time after time. The limited capacity of public land agencies to manage recreation inevitably leads to the conclusion that decision-makers must have a better understanding of these frameworks, the key concepts and assumptions upon which they are built, and their suitability for addressing different issues. Developing a capability in these areas ultimately will lead to more efficient, effective and equitable decisions.

While a number of frameworks do exist, not all of them necessarily address the issues confronting recreation management in the 21<sup>st</sup> century. Frameworks have improved the quality of recreation management in addressing many issues in the past. The issues with no frameworks are crying for development of new ones.

**Table 1. Example issues confronting public land recreation managers in the 21<sup>st</sup> century.**

<b>Issue</b>	<b>Description</b>
<i>What are the interactions between recreation and other uses of public lands?</i>	Recreation on public lands frequently occurs within the context of other uses, both utilitarian, such as timber harvesting, grazing, habitat protection, and symbolic, such as visual quality, spiritual meanings. How recreation is managed affects the ability of public lands to produce or preserve these other uses, and conversely, management for these other values influences what opportunities, where and how many there exist for recreation. In allocating lands to various uses, planners need to understand what trade offs, costs and consequences result from different proposed allocation decisions.
<i>Under what conditions can recreational use be limited, and what criteria would be needed to make visitor use allocation decisions?</i>	In certain situations, managers may feel that recreation use must be limited to a certain number of people during a specific time period. Such use limits have often been implemented on western whitewater rivers. Use limits are generally implemented when there have been clear threats to the biophysical or experiential component of a particular setting. When use limits are imposed and demand is above what the limit allows, use must be rationed and allocated. By allocation, we mean dividing up the total use among commercial outfitted groups and private visitor groups, a common practice in river situations. Rationing is the process for determining within each of these groups the specific individuals that are permitted to enter the setting.
<i>What are the regional level effects of site level decisions?</i>	Recreation sites, and larger areas, such as national parks, exist within a complex web of interacting supply and demand processes. Managers acting to protect or enhance the recreation attributes or tourism opportunities at one site may implement a series of actions that restricts people or their behavior, but in reality, the problem pops up somewhere else. For example, acting to limit use on one site may displace use to other sites because at least some users can no longer access the original site. In some situations, the organizational capacity to deal with increased use and impact may be very limited on the sites where use is displaced to.

<p><i>How can allocations of use opportunities between outfitted and non-outfitted publics be made?</i></p>	<p>Limiting recreational use will often require that limits also be placed on the number of “service days” of use allowed for outfitted use and on the number of visitor days of use allowed for the non-outfitted public. This decision is akin to cutting a highly desirable pie into two slices (sometimes more, depending upon agency and outfitting policy). Criteria are needed to determine what proportion of use should be outfitted and non-outfitted. Within this decision there are also decisions to allot use to individual outfitters and to ration use among non-outfitted visitors, assuming demand is above the allocated use. Outfitters generally ration use based on price, while for the non-outfitted visitor, rationing may be based on a waiting line, reservation, random drawing or a combination of techniques.</p>
<p><i>How can decision-makers better link settings, experiences and uses?</i></p>	<p>In a sense, managers produce opportunities for people to experience certain social-psychological outcomes. These opportunities are composed of attributes, combinations of attributes lead to the notion of setting. Attributes are things like rules, regulations, visitor use density, visitor types, amount and type of modification of the natural environment. Combinations of attributes lead to settings that have certain similarities; such settings can be typologized and classified. However, the link between setting attributes and the social-psychological outcomes is anything but clear, definitive and deterministic. Indeed, settings represent opportunities in the sense that they facilitate one type of social-psychological outcome over another, but do not ensure that a particular outcome actually occurs. The actual production of the outcome remains with the visitor. A major challenge however, is to increase our understanding of how settings, experiences (the package of social-psychological outcomes produced by the visitor) and other uses are linked. Increasing our understanding would allow more efficient and mindful allocation of opportunities to settings.</p>

<p><i>What is the role of tourism as a component of a community's economy?</i></p>	<p>Shifts in economic restructuring have increased not only the economic importance of tourism in western U.S. economics but also have changed relationships between communities and adjacent public lands. As employment and revenue from traditional resource commodity processing has dropped, many communities have turned to tourism as a tool to maintain their economic and social vitality. For many of these communities, however, the product sought by non-resident visitors is located on publicly administered lands, and even may be found in Congressional designated areas such as Wilderness, Wild and Scenic Rivers, National Parks. Other non-designated lands managed by the Forest Service or Bureau of Land Management may also contain settings for recreation that are popular with non-residents. Understanding what economic role tourism may hold in a community is difficult because many businesses in the tourism sector also appeal to residents, such as restaurants, service stations, lodging. Sorting out what is attributable to tourism is difficult.</p>
<p><i>How do changes in the amount, location and character of the human population impact formulation of policy?</i></p>	<p>The western United States has experienced dramatic population changes over the last 15 years. These changes have generally resulted from significant in-migration, particularly to rural areas and more specifically into the wildland urban interface. Such population growth has brought generally younger, less affluent individuals into these areas, but individuals also with a different distribution of intellectual skills, social preferences, and activism than the current residents. This population growth also accompanies structural shifts in regional economies, generally from manufacturing, natural resource dependent economies to service and amenity dependent economies. Such population growth is relatively widespread in counties with a large proportion of land managed by the federal government: About 94% of the counties in the U.S. with more than 30% of their land base in federal stewardship saw significant population growth in the 1990's.</p>
<p><i>What public land recreation opportunities should be commercialized and privatized?</i></p>	<p>With decreasing budgets and more conservative political philosophies, managers are under more pressure to commercialize recreation opportunities on public lands. Such commercialization and any accompanying privatization would increase the costs to the recreating public, raise expectations of the quality of opportunity to be provided, and increase revenues to management. But which recreation opportunities should be commercialized? What criteria would be used to make this decision?</p>

**Table 2. An inventory of existing frameworks addressing 21<sup>st</sup> century recreation planning issues on public lands.**

Framework	Principal Question	Key references
Recreation Opportunity Spectrum based Frameworks <ul style="list-style-type: none"> <li>• Recreation opportunity spectrum – 1970s</li> <li>• Tourism opportunity spectrum – 1990s</li> <li>• Water recreation opportunity spectrum – 2000s</li> </ul>	What settings exist and what should be provided?	Clark and Stankey 1979 Driver and Brown 1978  Dawson 2001  Haas et al. 2004
Limits of Acceptable Change based Frameworks <ul style="list-style-type: none"> <li>• Limits of Acceptable Change – 1980s</li> <li>• Visitor Impact Management – 1980s</li> <li>• Visitor Experience and Resource Protection – 1990s</li> <li>• Tourism Optimization and Management Model – 1990s</li> </ul>	How much change from natural conditions is acceptable?	Stankey et al. 1985  Graefe, Kuss, and Vaske 1990  Hof and Lime 1997  Manidis 1997
The Benefits Based Management Framework – 1990s	What experiences should be provided?	Driver and Bruns 1999
Carrying (Visitor) Capacity based Frameworks – 1960s + <ul style="list-style-type: none"> <li>• Social</li> <li>• Biophysical</li> <li>• Facility</li> </ul>	How many is too many?	Lime and Stankey 1971  Haas 2002
Placed-based Frameworks – 2000s	What meanings are attached to this place?	Kruger and Jakes 2003

## Literature Cited

- Bardwell, L. 1991. Problem framing: A perspective on environmental problem-solving. *Environmental Management* 15, no. 5: 603-12.
- Brewer, G. D. 1973. *Politicians, Bureaucrats, and the Consultant.: A critique of urban problem solving*. New York, NY: Basic Books.
- Checkland, P., and J. Scholes. 1990. *Soft systems methodology in action*. West Sussex, UK : John Wiley and Sons.
- Clark, R. N., and G. H. Stankey. 1979. "The recreation opportunity spectrum: A framework for planning, management and research." PNW-98. USDA Forest Service, Pacific Northwest Forest and Range Experiment Station, Portland, OR.
- Dawson, C.P. 2001. Ecotourism and Nature-Based Tourism: One End of the Tourism Opportunity Spectrum? In *Tourism, Recreation and Sustainability: Linking Culture and the Environment* (S.F. McCool and R.N. Moisey, eds.). CABI Publishing. Wallingford, UK. Pp. 41-53.
- Driver, B. L., and P. J. Brown. 1978. The opportunity spectrum concept and behavior information in outdoor recreation resource supply inventories: A rationale In *Integrated inventories of renewable natural resources: Proceedings of the workshop*. (tech. coords. Gyde H. Lund, Vernon J. LaBau, Peter F. Ffolliott, and David W. Robinson). Gen. Tech. Report RM-55. Ft. Collins, CO: USDA Forest Service, Rocky Mt. Forest and Range Exp. Station. Pp 24-31.
- Graefe, A. R., F. R. Kuss, and J. J. Vaske. 1990. "Visitor Impact Management: A planning framework." National Parks and Conservation Association, Washington, D.C.
- Haas, G., R. Aukerman, V. Lovejoy, and D. Welch. 2004. Water Recreation Opportunity Spectrum (WROS) Users' Guidebook. U.S. Department of the Interior, Bureau of Reclamation, Denver, CO.
- Haas, G.E. 2002. Visitor Capacity on Public Lands and Waters: Making Better Decisions. A Report of the Federal Interagency Task Force on Visitor Capacity on Public Lands. Submitted to the Assistant Secretary for Fish and Wildlife and Parks, U.S. Dept. of the Interior, Washington, D.C. 1 May 2002. Published by the National Parks and Recreation Association, Ashburn, VA. 42 p.
- Hof, M., and D. W. Lime. 1997. Visitor Experience and Resource Protection Framework in the National Park System: Rationale, current status, and future direction. In *Limits of acceptable change and related planning processes: Progress and future directions* (S. F. McCool, and D. N. Cole, eds). General Technical Report INT-371. Ogden, UT: USDA Forest Service, Intermountain Research Station. Pp 29-36.

- Kruger, L.E., and P.J. Jakes. 2003. The importance of place: Advances in science and application. *Forest Science* 49(6): 819-821
- Krumpe, E. E., and S. F. McCool. 1998. Role of public involvement in the Limits of Acceptable Change wilderness planning system. In *Limits of acceptable change and related planning processes: Progress and future directions* (S. F. McCool, and D. N. Cole, eds). INT-GTR-371. Missoula, MT: USDA Forest Service Intermountain Research Station. Pp 16-20.
- Lime, D. W., and H. Stankey. 1971. Carrying Capacity: Maintaining outdoor recreation quality. In *Recreation Symposium Proceedings*. Upper Darby, PA: Northeastern Forest Experiment Station, USDA Forest Service. Pp. 174-84.
- Manidis, R. Consultants. 1997. "Developing a tourism optimization management model (TOMM), a model to monitor and manage tourism on Kangaroo Island, South Australia." Manidis Roberts Consultants, Surry Hills, New South Wales.
- Manning, R. E. 2004. Recreation planning frameworks. *Society and Natural Resources: A Summary of Knowledge*. eds. M. J. Manfredo, J. J. Vaske, B. L. Bruyere, and P. J. Brown, 83-96. Jefferson, MO: Modern Litho.
- McCool, S. F., and D. W. Lime. 2001. Tourism Carrying Capacity: Tempting fantasy or useful reality? *Journal of Sustainable Tourism* 9, no. 5: 372-88.
- Moore, S. A., A. J. Smith, and D. N. Newsome. 2003. Environmental performance reporting for natural area tourism: Contributions by visitor impact management frameworks and their indicators. *Journal of Sustainable Tourism* 11, no. 4: 348-75.
- Nilsen, P., and T. Grant. 1998. A comparative analysis of protected area planning and management frameworks. In *Limits of acceptable change and related planning processes: Progress and future directions* (S. F. McCool, and D. N. Cole, eds). Ogden, UT: USDA Forest Service Rocky Mountain Research Station. Pp. 49-57.
- Rogers, E. M. 1995. *Diffusion of innovations*. New York, NY: Free Press.
- Stankey, G. H., and R. N. Clark. 1996. Frameworks for Decision Making in Management, In *Proceedings of the 1996 World Congress on Coastal and Marine Tourism* (M. Miller ed.). Honolulu, Hawaii: University of Washington. Pp 55-59
- Stankey, G. H., D. N. Cole, R. C. Peterson M. E. Lucas, and S. S. Frissell. 1985. *The limits of acceptable change (LAC) system for wilderness planning*. Gen. Tech. Rep. INT-176. Ogden, UT: USDA Forest Service.
- Weick, K. E., and K. M. Sutcliff. 2001. *Managing the Unexpected: Assuring high performance in an age of complexity*. San Francisco: Jossey-Bass.