

Visitor Capacity - A Dilemma of Perspective: When Is Popularity Too Much of a Good Thing?

Glenn Haas, Ph.D., 2003

You can't see the forest for the trees. Is the glass half full or half empty? What you see depends on where you sit. Beauty is in the eye of the beholder. These are but a few of the popular clichés that warn us of the entrapment of human perspective.

In the spring of 2001, a senior recreation planner in a federal land agency was contacted and asked about setting up a demonstration project to test the ideas coming forth from the Federal Interagency Task Force on Visitor Capacity on Public Lands. He declined the offer, stating, "We don't have a capacity problem. We don't want to limit visitors."

This perspective is prevalent in the recreation profession; that is, a capacity is a limit on public use and doesn't have to be addressed until there are unacceptable conditions. While the planner's perspective enabled him to make a quick and efficient decision, another perspective would view waiting until there's a problem as tantamount to handing the decision-making authority to the judicial and political system. I believe that the recreation profession may have trapped itself in a narrow line of thinking over the last 20 years and should engage in a broader dialogue of divergent perspectives in search of convergence in understanding visitor capacity.

By definition, a visitor capacity is the number or supply of available recreation opportunities to be accommodated in an area. It's a basic and fundamental decision used in managing, planning, allocating permits, marketing and visitor information, budgeting and many other functions. The difficulty isn't in deciding a reasonable capacity number, but the inputs necessary to make a sound decision. Therein lies the dilemma of perspective.

The purpose of this article is to highlight for park and recreation decision makers several perspectives about visitor capacity (historically referred to as recreational carrying capacity), and to offer an alternative view that was stimulated from the 24-month Federal Interagency Task Force on Visitor Capacity on Public Lands initiated by the U. S. Department of the Interior. The final report of the task force was recently published and is available via NRPA (www.nrpa.org).

Human Perspectives

Humans use a large array of tools or mental short cuts to deal with the complexity of life. Examples of such tools include routines, intuition, stereotypes, selective perception, saliency, anchoring, prejudice, and assumptions. These tools are valuable and help to provide structure and understanding to a situation.

Human perspective is also one such tool. A perspective is a vantage point or frame for viewing the world. It's a way of seeing things, a way of thinking, and it helps to explain

"where one is coming from." It's a person's reality, shaped by countless factors such as parents and friends, childhood history, religion, academic background, professional experience, personal motivations, biases and personality traits. Perspectives will often vary among individuals, but may also become institutionalized by large affinity groups, communities, professions, businesses and agencies.

Unfortunately, a perspective provides only a partial view of reality, and therein lies the trap. Human perspective has been referred to as the "mother of all biases," the giant short cut of the mind that can lead us astray, and a decision-making pathogen. Each of us is entrapped by a vantage point that doesn't permit seeing the totality of a situation. The danger lies in the fact that incomplete and imperfect information may lead to poor decision making.

Decision science reminds us that to be forewarned is to be forearmed, and advocates multiframing (deliberately examining a situation from many perspectives). Decision situations take on a new reality when examined from multiple perspectives, much like viewing a piece of sculpture or the Grand Canyon from different vistas and at different times of day. Multiframing involves deliberately considering counsel from people with maximally different perspectives; multiframing is contrary to the human tendency to seek counsel only from those with similar perspectives.

Ironically, whereas diversity of perspective can be an obstacle and inconvenience to efficient decision making, it can also enrich and lead to more effective and better decisions. The following section offers an alternative perspective on visitor capacity in the hope of stimulating a broader dialogue to help advance the profession's understanding and use of this important management tool.

Visitor Capacity Perspectives

There are numerous dilemmas of perspective associated with visitor capacity. This article discusses several key ones identified in the deliberations of the task force and briefly mentions others for future deliberation.

There are two dilemmas associated with the question, "A capacity for recreation `what?'" First, the concept of capacity in the literature has been applied to many elements, such as recreation activities, design capacity, psychological capacity, biological capacity, administrative capacity, and transportation capacity. Does an area have one capacity or multiple capacities? Does a manager need to make one decision or multiple decisions? Much of the literature is discipline-specific, and offers the perspective that each element needs a separate number and decision.

An alternative perspective views a visitor capacity as an omnibus decision that duly considers all the relevant and important information in the course of making a visitor-capacity decision. In some instances, biological factors may be the defining consideration, while in others it would be design and psychological considerations.

Second, effective communication is stymied by capacity-related terms being used interchangeably and inappropriately. Some managers associate a capacity with a specific recreation activity, while others associate a capacity with a specific resource (e.g., wildlife, soil, water, sound, vegetation). Unfortunately, a profession-wide lexicon doesn't exist similar to those in the legal, engineering, and medical professions.

An alternative perspective integrates these terms in defining a visitor capacity as the number or supply of available "recreation opportunities" to be accommodated in an area. A recreation opportunity is commonly defined in the recreation profession as the opportunity for a person to participate in a particular recreational activity in a specific setting to realize a preferred type of experience and subsequent benefits. Agencies manage recreational activities and settings as the inputs to recreationists consuming an experience, and with society gaining the benefits of a healthy and active outdoor recreation citizenry.

It should go without saying that there's a connectedness of recreational activities, settings, experiences and benefits. It's not sufficient to make a visitor capacity decision for a single recreation activity or a specific resource consideration, such as soil compaction or wildlife disturbance. Rather, there's a need to be more comprehensive and consider all the important factors that constitute the desired recreation opportunity that the area is being managed to provide. In other words, a thorough description of the desired recreation opportunity for an area is a prerequisite to visitor-capacity decision making.

The Clarity of Management Objectives

The Wildland Planning Glossary defines a management objective as a clear unambiguous statement that contains desired outcomes, a time period for accomplishment, verifiable and measurable factors or standards of quality, quantity, and cost, and a responsible person. Most management plans don't contain objectives that meet these definitional characteristics.

One popular perspective is that management objectives should be broad and general to provide maximum discretion and authority, and little budgetary obligation and accountability. For many decision makers, this perspective is appealing and dominant.

An alternative perspective is that management objectives provide the specifications or contractual details between a decision maker and the American public. This perspective sees the greatest dilemma in addressing visitor capacity as the lack of clarity and detail in the recreation management objectives, often repeating general Organic Act language or language used in another plan. The objectives are absent of the detail and clarity afforded by the inclusion of indicators and standards and a full discussion of the desired recreation opportunity.

By way of a metaphor, the first perspective constructs a house by using general conceptual design drawing. The alternative perspective constructs a house by using a complete set of engineering drawings and specifications that meet or exceed the standards

of code. Stated otherwise, the latter perspective sees the devil not in the details, but rather in not being detailed.

The Purpose of a Visitor Capacity

For many managers and researchers, the only purpose of visitor capacity is for limiting public access. Many professionals don't view a capacity as the number or supply of available visitor opportunities to be accommodated in an area, nor as a decision that's separate and distinct from subsequent decisions about "limiting" public access.

Another perspective is that a visitor capacity has no purpose and that the concept should be dispatched from our profession.

The alternative perspective views the purpose of a capacity to be much broader, useful, and proactive than for limiting public access. The multiple purposes of a capacity are apparent from viewing its application in other facets of everyday life (e.g., restaurants, airports, golf courses, special events, classrooms, hotels, commercial fishing, annual timber cuts, air-travel operations, sport hunting, museums, amusement parks, manufacturing, bank loans).

A Scientific Finding or Administrative Decision

There's a perspective among many managers, and perhaps some researchers, that a capacity decision can be scientifically determined. While the published literature has tried to dispel this myth, it remains prevalent. It's easy to find management plans where managers dispatch visitor-capacity decisions to a future time or person because of a desire for more science and a level of science absent of uncertainty. This perspective believes that, with enough science, a capacity will be revealed, thus negating the need for an administrative decision.

An alternative perspective is that a visitor capacity is a fundamental administrative decision. This perspective is based on 30 years of recreation science, which confirms that the relationship between recreation use and resource change is complex and multidimensional, and defies predictability.

Former Forest Service Chief Jack Ward Thomas has stated, "For not only are ecosystems more complex than we think--they are more complex than we can think." In the case of scientifically determining a visitor capacity, one is challenged to understand the human mind as well as natural ecosystems, a daunting task and compelling reason to diversify the recreation science efforts to include the field of decision science and how to improve our ability to make principled, reasoned, transparent and legally sufficient decisions.

A visitor--capacity decision is an administrative decision based on sound professional judgment. Sound professional judgment is defined as a decision that has given full and fair consideration to all appropriate information, is based on principled and reasoned analysis and the best available science and expertise, and is in compliance with applicable

laws. While science is an important input to capacity decisions, decision makers shouldn't be trapped by the illusion of scientific determinism or unreasonable certainty.

The Illusions of Causality

The most popular strategy today to address capacity is to establish indicators and standards for desired resource and social conditions, implement a field monitoring program, routinely compare current conditions to desired conditions, and take action to mitigate the use and users attributed to be the cause of any unacceptable changes. The limits-of-acceptable-change system is a widely known example of a monitoring-based strategy to address capacity.

For many managers, this approach is particularly attractive because it's believed to circumvent, postpone and even negate the need for making a visitor-capacity decision. This perspective argues that a scientifically defensible capacity number would be evident with the adequate monitoring of carefully selected indicators and standards, and fosters the perspective that the only purpose of a visitor-capacity number is to limit public access.

An alternative perspective sees the monitoring-based strategy as having considerable limitations. For example, one might question the logic that, if 30 years of scientific study tells us that the relationship between recreation use and resource change can't be scientifically determined under levels of relatively high experimental control, how can relationships be determined by field monitoring, given that monitoring is a much less rigorous scientific method. This alternative perspective recognizes the illusion of causality associated with field monitoring; that is, a major limitation of field monitoring is the difficulty of attributing what (who, when, why, how) is the cause(s) that led to unacceptable conditions. Furthermore, adequate science-based recreation monitoring programs are rare, owing to budgets, available personnel, needed competencies and higher priorities.

The cumulative effect of these limitations is imposed reactive capacity decision making, often in an atmosphere of controversy and emotion that can wreak havoc on sound decision making.

This alternative perspective views monitoring resource conditions, recreation opportunities and management efforts (i.e., planned versus actual) as a fundamental and vital responsibility of recreation professionals. It views monitoring as the mechanism to learn from past decisions, recognize change and help trigger sound adaptations. Yet monitoring shouldn't be viewed as a substitute or a reason to abdicate the professional responsibility to know and manage the supply of recreation opportunities that will be accommodated in an area.

The Fear of Litigation

A common perspective of litigation includes fear, anxiety and major conflict. The influence of this perspective has been significant, resulting in many visitor capacity decisions being dispatched to another time or person. In *Applying Judicial Doctrine to Visitor Capacity Decision Making*, I've described the situation as follows:

Most park and recreation professionals have had little, if any, experience with the judiciary. It's common to view the judicial branch akin to the "woodshed;" that is, to be litigated is to have one's integrity and competency questioned, to find fault and failure, to bring undue attention, to divert valuable time and resources, or to forego administrative discretion and power. To consider the judiciary as a valued management tool is an oxymoron for most.

The alternative perspective views the judiciary as a valued resource with more than 200 years of experience in making complex decisions, serving as the ultimate decision-making authority in the land, and employing a set of tools that can empower managers and improve decision making. Legal doctrines, such as judicial deference, ripeness, due diligence and due care, and sufficient evidence can provide a framework for managers to make better decisions and communicate more effectively. For example, the doctrine of judicial deference says that the court will support an administrative decision if there's demonstrable evidence that the decision is principled, reasoned and deliberate, and followed due process.

With any new law or its implementation (e.g., Endangered Species Act, Clean Air Act, National Environmental Policy Act), the judicial system is called upon to help interpret the law or its implementing regulations. Litigation is a natural part of the maturation and implementation of any law. Ironically, what the recreation profession fears is also what the profession needs; that is, the profession needs a body of case law to help define a legally sufficient visitor-capacity decision.

Other Dilemmas of Perspectives

There are other dilemmas of perspective confounding our understanding of visitor capacity. Several are briefly mentioned in this section to arouse further dialogue.

What geographic scale should be used for capacity decisions? Most recreation science has focused at the site level, such as a campsite, trail segment or destination. What value might there be from considering capacity at the microorganism level? In *The Future of Life*, Edward Wilson reminds us that, while the ordinary perspective of wilderness may have vanished at Walden Pond, untrammelled nature and ancient wilderness lives on in the dirt and rotting vegetation. Alternatively, I've argued for seeing merit in addressing capacity decisions at a larger regional or "visitation range" scale. There may be an advantage to considering several scales in addressing visitor capacity.

Who should be considered in visitor capacity decisions? Most park and recreation plans and studies consider only the current on-site recreationists. Yet recreation science has acknowledged that visitors are often displaced from an area for capacity-related reasons. There are also socioeconomic trends and shifting populations that suggest a new future visitor. And, of course, there are those millions of disenfranchised Americans who aren't aware of our great outdoors, or who don't feel welcome there. It's not reasonable or legally sufficient to base a capacity decision or establish quality standards solely on input from the current visitors. This is akin to the private sector doing market research only on its current satisfied customer base.

How should a recreation experience be considered in capacity decisions? Most recreation science has focused on socialization, or specifically crowding, as a proxy to assess an area's recreation capacity. Yet recreation science has determined that a recreation experience is much more than socialization or crowding. A recreation experience is a composite of multiple experiential dimensions (e.g., challenge, freedom, physical exercise, escape from everyday stresses) that involve multiple senses (e.g., sight, sound, smell). The visual perception of a crowded condition is only one among many dimensions of a recreation experience, and it largely involves only one of the five senses. What value might there be from due consideration of the totality of the recreation experience?

Is the dilemma one of too much recreation demand or too little "perceived" recreation supply? Human rationality is based on the assumption that people have complete information. This assumption isn't reasonable because recreation visitors don't have full information about the recreation opportunities in an area.

It can be argued that the supply of opportunities on the ground is constrained by what's known by the visitor: that is, visitor capacity is a function of information and visitor knowledge. It would seem reasonable that the recreation capacity in an area could be increased if the visitors had full knowledge of the type and location of available recreation opportunities. Similarly, it would seem reasonable that visitors (recreation demand) would redistribute themselves and reduce the situations where demand exceeds supply if potential visitors could get full information about the diversity of available recreation opportunities.

Perhaps the dilemma is that the supply of recreation opportunities in the mind of the visitor isn't the same as the real supply of recreation opportunities being provided on the ground. Perhaps the dilemma is how to market and provide more complete information about the supply of recreation opportunities to past, present and potential visitors.

Future Capacity

In 2000, a French Concorde exploded upon takeoff from Paris. Immediately, the aircraft manufacturer began to investigate the fuel lines and all Concorde planes were grounded. Shortly thereafter, a home video of the incident showed a tire shredding and debris puncturing the fuel system. The tire manufacturer was asked to investigate. Later, a piece

of metal was discovered on the runway, which led to assessing the runway safety and maintenance procedures and standards. The first appearances of the cause of this tragedy were wrong. Visitor capacity also suffers from partial and incomplete first appearances.

At the conceptual level, the visitor-capacity dilemma requires a broadening of the dialogue and perspective. At the practical level, the visitor-capacity dilemma requires national coordination and leadership that transcends the individual agency perspectives, development of management plans that include quality standards and thorough descriptions of the desired recreation opportunity, utilization of sound professional judgment including the best available science, and an increased understanding of the wisdom of the judiciary.

Visitor capacity is the supply of available visitor opportunities that will be accommodated in an area. It's a basic and fundamental decision based on sound professional judgment. It's also a basic and fundamental responsibility for recreation professionals to know the supply of visitor opportunities for the area being managed. In the absence of proactively accepting its responsibility, the profession will be abdicating one of its most critical decisions to the political and judicial system.

The Multiple Purposes of a Visitor CAPACITY

Supply measurement: A capacity is a numeric measurement of the supply of available recreation opportunities that will be accommodated in an area.

Trigger for actions and resources: A capacity is a trigger point (i.e., a number or numeric range), whereby as current use approaches or exceeds the available supply, predetermined management responses can be activated or resources allocated. A numeric capacity is, in effect, a trigger or signal to justify and activate a suite of management responses. In some instances, use exceeding capacity may justify the expansion of the supply of appropriate recreation opportunities, and in other instances, it may justify the alteration or limitation of use or demand.

Public and resource risk management: A numeric capacity is a reasonable and responsible risk management tool for situations where nature or human activity creates a high-risk environment for the public, or where human behavior might put the natural or cultural resources at risk.

Private sector and community predictability: A numeric capacity provides clarity for business people to act and plan accordingly. By comparing current demand with available supply, private sector permittees and communities can anticipate their growth trend and potential, plan appropriate investment opportunities or divestiture steps, or take collaborative actions with land managers to mitigate negative consequences of demand approaching or exceeding capacity.

Visitor trip planning: A numeric capacity, particularly when compared to real-time use levels, can be very helpful information to a discerning recreationist. For example, visitors

might find it useful to be informed that a beach, backcountry lake area or battlefield is at 30 percent, 90 percent or 120 percent of visitor capacity. This information may result in a "voluntary redistribution" of people across place or time while still allowing freedom of choice, and help the quality of the experience.

Administrative and historic record: Complex decisions need to have supporting documentation detailing how and why decisions were made, and the process that was used. This record becomes the historic anchor from which to learn by experience and to compare yesterday with today's new information, data, and circumstances. It's also vital in responding to judicial inquiries for demonstrable evidence of the sound professional judgment.

Regional recreation planning: Numeric capacities are fundamental for regional recreation planning, recreation demand and supply analysis, multi-jurisdictional allocation decisions, coordinated visitor trip planning information systems, determination of facility needs and investment opportunities, and identification of alternative or substitute opportunities that are available nearby.

Allocation decisions: A numeric capacity is the supply of available recreation opportunities and is fundamental for making allocation decisions involving where, when, or how many of a particular recreation opportunity can be accommodated (e.g., outfitter and guide permittees, concessionaires, mountain bikes, personal water craft, youth groups). Similarly, a numeric capacity is fundamental for making multiple use allocations decisions (e.g., timber harvesting, research closures, reservoir drawdown).

Limiting public use: A numeric capacity can serve as the measurement of allowable use or access that is permissible for a certain time or place.

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