Addressing recreation conflict:
Providing a conceptual basis for management

Dave Marcouiller, Ian Scott, and Jeff Prey [1]

As demands for opportunities to partake in outdoor recreation grow, conflict among uses will become an increasingly important issue of public policy. Two alternative conflict arenas bear continued, and increasingly creative, management input for those charged with prioritizing scarce public resources. The most obvious arena is among alternative recreational uses of a finite land base (Carothers et al. 2001). This intra-use conflict grows due to both increased aggregate demand for outdoor recreation (Manning and Valliere 2001) and technological change that allows new forms of outdoor recreation such as geo-caching, all-terrain-vehicles, and jet skis (Roe and Benson 2001; Wang and Dawson 2005) . The second arena of conflict is that which arises between outdoor recreation and other forms of land use (Clawson 1974; Marcouiller 2000). This inter-use conflict has affected how open space develops and is represented by the struggles over such disparate issues as residential development, agriculture, and forest management.

The interaction of recreational user groups provides a key challenge to recreation managers. To gain insight into the spectrum of these interactions, we have embarked upon a project to gain a better understanding of how different user groups interact. In addition, we are attempting to link this understanding to management relevant strategies to better deal with these interactions. This short literature review is written as an introduction of concepts and a background document to serve as a primer for experts involved in the Delphi process.

Relevant concepts

Conceptually, conflict is most frequently understood as a result of goal interference among users (Jacob and Schreyer 1980; Ivy et al. 1992; Ruddell and Gramann 1994; Gibbons and Ruddell 1995; Vaske et al. 2000; Vaske et al. 2004; Wang and Dawson 2005), but it is also attributed to differences in social values (Adelman et al. 1982; Saremba and Gill 1991; Watson et al. 1994; Vaske et al. 1995; Carothers et al. 2001; Whittaker et al. 2001), the subjective emotional state of the user (Lee and Shafer 2002; Vitterso et al. 2004; Lee et al. 2005) or sense of place (Stokowski 2002). There is a wide range of possible interactions amongst

recreational users and groups that can represent both positive and negative outcomes. Conflict occurs when the interaction leads to negative outcomes for at least some of the participants (Owens 1985). Within our conceptualization of conflict, interaction types fall into four basic categories along a spectrum that include (1) complementary, (2) supplementary, (3) competitive[2], and (4) antagonistic (van Kooten 1993). The first two represent beneficial or neutral outcomes while the latter two represent conflict, which has diminishing returns or wholly negative outcomes. Characteristics, outcomes, and examples for each type of interaction are shown in Table 1. Quite simply, the challenge for land managers involves managing group interaction with an eye toward maximizing complementary and supplemental uses while minimizing those which result in competition or antagonism. To be sure, this is easier said, than done.

Table 1. Spectrum of interaction types and their recreational outcomes

Interaction Type	Key Characteristic	Outcome	Example
Complementary	Increasing rates of return with increased use	Positive sum & growing – No conflict	Canoeing and Fishing
Supplementary	Neutral interaction	Positive sum – linear Minor conflict	Snowmobiling and All Terrain Vehicle Use
Competitive	Decreasing rates of return with increased use	Trending toward zero sum - Conflict	Fishing and jetskiing
Antagonistic	Any activity of one drives the other to zero	Negative sum Strong Conflict	Wilderness camping and ATV use

Indeed, managing user interaction to enhance the positive and ameliorate the negative presents a complex challenge. It involves both an understanding of interaction type between different recreational user groups and the will to prioritize and apply tools to segregate competitive and antagonistic recreational activities (Anderson and Brown 1984; Vaske et al. 1995; Carothers et al. 2001)

---

[2] Although we recognize there to be a distinction in the literature between "competition" for scarce resources and "incompatibilities" in goals, we have chosen to use the term "competitive" to represent that type of interaction which exhibits diminishing rates of return between uses.

While provision of complementary and supplementary uses would appear straightforward, the identification of thresholds of interaction suggests that these types of interaction occur only up to some point. After some threshold point, complementarity and supplementarity turn to competitive interactions (Stankey and McCool 1984; Vaske et al. 1986; Shelby et al. 1996; Manning et al. 1999).[3] Thus, there is a need to understand both relative interactions and the extent, or range, in which these interaction types exist.

Recreational use conflicts are often seen as asymmetrical amongst different user groups (Adelman et al. 1982; Watson et al. 1994; Donnelly et al. 2000; Carothers et al. 2001; Wang and Dawson 2005). For example, bird watchers may experience significant goal interference (antagonism) as a result of common use by all terrain vehicle users, yet the all terrain vehicle users view bird watching as generally supplemental to their activity. Thus, understanding relative compatibility must allow for a two-way interaction that could be, and often is, diametrically opposed.

Geographic scale is also a key determinant in how user interaction plays itself out. At large scales (small geographic areas), conflict is usually the result of interactions amongst individual users and often tends to be related to crowding with interaction types tending toward the competitive and antagonistic (Vaske et al. 1980; Hammitt et al. 1984; Hall and Shelby 2000).[4] At small scales (large geographic areas), interactions are usually at the group level and can be spread out and segregated thus tending toward the more complementary and supplementary.

The relative compatibility of different recreation users is also influenced by a range of factors relating both to the users – such as the person's skill level (Vaske et al. 2000; Vaske et al. 2004), previous knowledge of the area in question (Vaske et al. 1980; Kuentzel and Heberlein 1992), level of specialization (Hammitt et al. 1984) or personal expectations (Shelby et al. 1988; Whittaker and Shelby 1988; Shindler and Shelby 1995; Vitterso et al. 2004; Lee et al. 2005) – and to the actual site of where the use will take place – accessibility of the site (Shelby et al. 1989), the nature of the infrastructure (Westover and Collins 1987; Shelby et al. 1989) and site design (Vaske et al. 1995; Carothers et al. 2001). These different factors may be mitigating or compounding, altering the relative compatibility of recreation uses. Mitigating factors will tend to increase the complementarity of

---

[3] The literature provides reference to thresholds in satisfaction or acceptability which is essentially the same concept. The other key point from the literature is that threshold points are likely to shift as individual experiences and expectations change.

[4] It is important to note that many researchers have found little correlation between crowding and satisfaction with the recreation experience (c.f. Manning and Ciali 1980; Vaske et al. 1980; Kuentzel and Heberlein 1992; Manning and Valliere 2001; Johnson and Dawson 2004) but Manning and Valliere (2001) find some fault with the measurement of satisfaction, while Robertson and Regula (1994) find support for the idea that people being displaced are not measured in the studies. Finally, Chambers and Price (1986) find evidence of a positive relationship between crowding and satisfaction.

the activities while compounding factors will tend to increase the competition amongst uses.

   Thus, an understanding of relative user compatibility must account for an array of thematic issues. As stated above, these involve (1) interaction among alternative uses, (2) thresholds of interaction, (3) symmetrical interaction, (4) relevant geographic scale, and (5) mitigating or compounding factors   These five elements provide the substance of our data collection need for this project. Specifically, we intend to organize the existing practical knowledge about user interaction in Wisconsin through a series of informal yet purposive interviews with experts familiar with outdoor recreation conflict.

Management-relevant input

   Application of this understanding of relative user compatibility extends our thinking into the management realm. Consider the spectrum of interaction from antagonistic to complementary. Were objectives of management to include minimizing antagonistic and competitive uses while maximizing supplementary and complementary uses, a possible set of strategies might include separation (segregation) or regulation of antagonistic and competitive uses while encouraging and monitoring uses which are supplemental and complementary. This range of tools useful for managing interaction is shown in Figure 1.

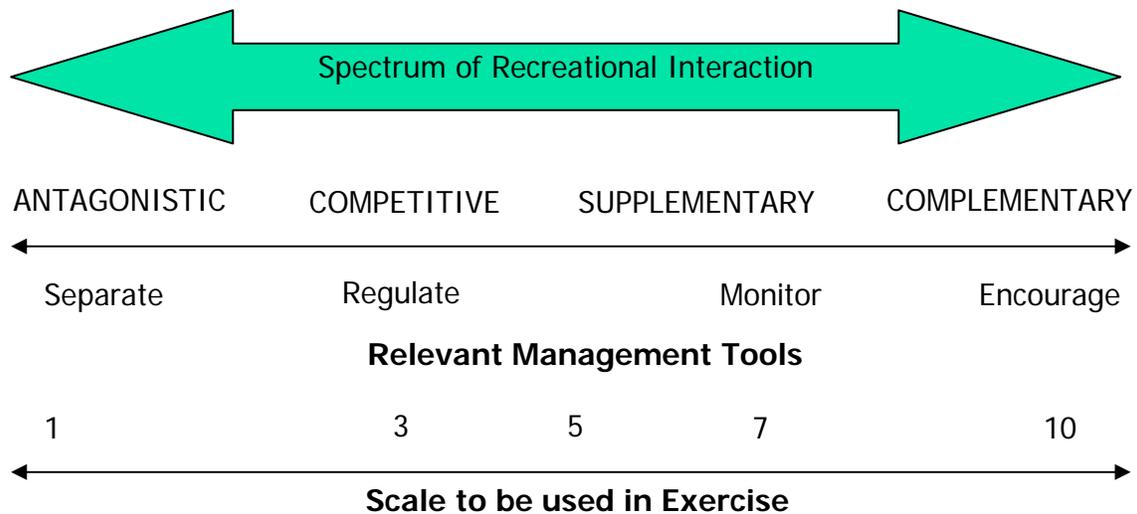|	Spectrum of Recreational Interaction		
ANTAGONISTIC	COMPETITIVE	SUPPLEMENTARY	COMPLEMENTARY
Separate	Regulate	Monitor	Encourage
	Relevant Management Tools		
1	3 5	7	10
	Scale to be used in Exercise		

Figure 1. Spectrum of recreational interaction, relevant management tools, and the scale for use in the compatibility exercise

You, as a professional involved with outdoor recreation, fit into our overall research design as someone whose objective opinion and professional expertise can span across user groups to provide input into an overall compatibility matrix

that is specific to outdoor recreation in Wisconsin. Our approach to gathering relative user compatibility data will involve a modified Delphi process soliciting the input of experts such as you. The following specific issues and tasks are presented for you to consider prior to our upcoming meeting.

Specific issues for expert discussion:

1.   In general, how do the primary outdoor recreation activities interact with one another (big question --- to include geographic scale, asymmetry, and thresholds)?

2.   How effective have current tools been in minimizing competitive and antagonistic interactions? What new tools could be crafted to alleviate conflict?

3.   How effective are current policies to enhance the amount of complementarity and supplementarity in the recreation options present across Wisconsin? What new tools could be crafted to maximize the beneficial types of interaction?

4.   What key issues exist between recreation and alternative land uses such as residential development, forestry, and agriculture?

Tasks for experts to perform before the interview:

a.   Develop a first blush reaction to interaction type using the recreation compatibility matrix included with this reading material. For meaningful comparisons, use a numerical ranking along the interaction spectrum from 1 (complete antagonism) to 10 (complete complementarity). For purposes of scale, assume that supplementary (neutral interaction) is 7 as shown in Figure 1.

b.   Review the chart of mitigating and compounding factors and add any that are missing or delete ones that are placed inappropriately.

c.   Consider the ability of recreation managers and creative public policy to use this information to better minimize recreational use conflicts.

Literature Cited

Adelman, B. J. E., T. A. Heberlein and T. M. Bonnicksen. 1982. Social psychological explanations for the persistence of a conflict between paddling caanoeists and motorcraft users in the Boundary Waters Canoe Area. *Leisure Sciences* 5, 1: 45-61.

Anderson, D. H. and P. J. Brown. 1984. The displacement process in recreation. *Journal of Leisure Research* 16, 1: 61-73.

Carothers, P., J. Vaske and M. Donnelly. 2001. Social values versus interpersonal conflict among hikers and mountain bikers. *Leisure Sciences* 23, 1: 47-61.

Chambers, T. W. M. and C. Price. 1986. Recreational congestion: some hypotheses tested in the forest of Dean. *Rural Studies* 2, 1: 41-52.

Clawson, M. 1974. Conflict, strategies, and possibilities for consensus in forest land use and management.In *Forest Policy for the Future: Conflict, Compromise, Consensus*, M. Clawson, ed. Washington: Resources for the Future.

Donnelly, M., J. Vaske, D. Whittaker and B. Shelby. 2000. Toward an understanding of norm prevalence: A comparative analysis of 20 years of research. *Environmental Management* 25, 4: 403-414.

Gibbons, S. and E. Ruddell. 1995. The effect of goal orientation and place dependence on select goal interferences among winter backcountry users. *Leisure Sciences* 17, 3: 171-183.

Hall, T. and B. Shelby. 2000. Temporal and spatial displacement: Evidence from a high-use reservoir and alternate sites. *Journal of Leisure Research* 32, 4: 435-456.

Hammitt, W. E., C. D. McDonald and F. P. Noe. 1984. Use level and encounters: Important variables of perceived crowding among nonspecialized recreationists. *Journal of Leisure Research* 16, 1: 1-8.

Ivy, M. I., W. P. Stewart and C. C. Lue. 1992. Exploring the Role of Tolerance in Recreational Conflict. *Journal of Leisure Research* 24, 4: 348-360.

Jacob, G. R. and R. Schreyer. 1980. Conflict in outdoor recreation: A theoretical perspective. *Journal of Leisure Research* 12: 368-380.

Johnson, A. and C. Dawson. 2004. An exploratory study of the complexities of coping behavior in adirondack wilderness. *Leisure Sciences* 26, 3: 281-293.

Kuentzel, W. F. and T. A. Heberlein. 1992. Cognitive and Behavioral Adaptations to Perceived Crowding - A Panel Study of Coping and Displacement. *Journal of Leisure Research* 24, 4: 377-393.

Lee, B., C. Shafer and I. Kang. 2005. Examining relationships among perceptions of self, episode-specific evaluations, and overall satisfaction with a leisure activity. *Leisure Sciences* 27, 2: 93-109.

Lee, B. and C. S. Shafer. 2002. The dynamic nature of leisure experience: An application of Affect Control Theory. *Journal of Leisure Research* 34, 3: 290-310.

Manning, R. and W. Valliere. 2001. Coping in outdoor recreation: Causes and consequences of crowding and conflict among community residents. *Journal of Leisure Research* 33, 4: 410-426.

Manning, R., W. Valliere and B. Wang. 1999. Crowding norms: Alternative measurement approaches. *Leisure Sciences* 21, 2: 97-115.

Manning, R. E. and C. P. Ciali. 1980. Recreation Density and User Satisfaction: A Further Explanation of the Satisfaction Model. *Journal of Leisure Research*: 329-345.

Marcouiller, D. W. 2000. The compatibility of timber production with forest-based recreation: Developing a basis for evaluating user conflicts. Working paper 00-01, Department of Urban and Regional Planning, University of Wisconsin – Madison.

Owens, P. L. 1985. Conflict as a Social Interaction Process in Environment and Behaviour Research: The Example of Leisure and Recreational Research. *Journal of Environmental Psychology* 5: 243-259.

Robertson, R. A. and J. A. Regula. 1994. Recreational displacement and overall satisfaction - A study of central Iowa licensed boaters. *Journal of Leisure Research* 26, 2: 174-181.

Roe, M. and J. Benson. 2001. Planning for conflict resolution: Jet-ski use on the Northumberland coast. *Coastal Management* 29, 1: 19-39.

Ruddell, E. J. and J. H. Gramann. 1994. Goal orientation, norms, and noise-induced conflict among recreation areas users. *Leisure Sciences* 16, 2: 93-104.

Saremba, J. and A. Gill. 1991. Value conflicts in mountain park settings. *Annals of Tourism Research* 18: 455-472.

Shelby, B., N. S. Bregenzer and R. Johnson. 1988. Displacement and product shift - Empirical evidence from Oregon rivers. *Journal of Leisure Research* 20, 4: 274-288.

Shelby, B., J. Vaske and M. Donnelly. 1996. Norms, standards, and natural resources. *Leisure Sciences* 18, 2: 103-123.

Shelby, B., J. J. Vaske and T. A. Heberlein. 1989. Comparative analysis of crowding in multiple locations: results from fifteen years of research. *Leisure Sciences* 11: 269-291.

Shindler, B. and B. Shelby. 1995. Product shift in recreation settings - findings and implications from panel research. *Leisure Sciences* 17, 2: 91-107.

Stankey, G. H. and S. F. McCool. 1984. Carrying capacity in recreational settings: Evolution, appraisal, and application. *Leisure Sciences* 6, 4: 453-473.

Stokowski, P. 2002. Languages of place and discourses of power: Constructing new senses of place. *Journal of Leisure Research* 34, 4: 368-382.

van Kooten, G. C. 1993. *Land Resource Economics and Sustainable Development: Economic Policies and the Common Good*. Vancouver: UBC Press.

Vaske, J., P. Carothers, M. Donnelly and B. Baird. 2000. Recreation conflict among skiers and snowboarders. *Leisure Sciences* 22, 4: 297-313.

Vaske, J., M. Donnelly, K. Wittmann and S. Laidlaw. 1995. Interpersonal versus social-values conflict. *Leisure Sciences* 17, 3: 205-222.

Vaske, J., R. Dyar and N. Timmons. 2004. Skill level and recreation conflict among skiers and snowboarders. *Leisure Sciences* 26, 2: 215-225.

Vaske, J. J., M. P. Donnelly and T. A. Heberlein. 1980. Perceptions of crowding and resource quality by early and more recent visitors. *Leisure Sciences* 3, 4: 367-381.

Vaske, J. J., A. R. Graefe, B. Shelby and T. A. Heberlein. 1986. Backcountry encounter norms - theory, method and empirical-evidence. *Journal of Leisure Research* 18, 3: 137-153.

Vitterso, J., R. Chipeniuk, M. Skar and O. Vistad. 2004. Recreational conflict is affective: The case of cross-country skiers and snowmobiles. *Leisure Sciences* 26, 3: 227-243.

Wang, C. and C. Dawson. 2005. Recreation conflict along New York's Great Lakes coast. *Coastal Management* 33, 3: 297-314.

Watson, A. E., M. J. Niccolucci and D. R. Williams. 1994. The nature of conflict between hikers and recreational stock users in the John-Muir-Wilderness. *Journal of Leisure Research* 26, 4: 372-385.

Westover, T. N. and J. R. J. Collins. 1987. Perceived crowding in recreation settings: an urban case study. *Leisure Sciences* 9: 87-99.

Whittaker, D., M. Manfredo, P. Fix, R. Sinnott, S. Miller and J. Vaske. 2001. Understanding beliefs and attitudes about an urban wildlife hunt near Anchorage, Alaska. *Wildlife Society Bulletin* 29, 4: 1114-1124.

Whittaker, D. and B. Shelby. 1988. Types of norms for recreation Impacts - Extending the social norms concept. *Journal of Leisure Research* 20, 4: 261-273.

Recreational Use Conflict – LAND based

Rank on a scale of 1 (antagonistic) to 10 (fully complementary), 7 is the neutral interaction (supplementary).

What happens when ?

From the perspective of people who are ↓:	Hunting	Camping	Mountain Biking	Linear Trail Biking	Wildlife Watching	Hiking	Horseback Riding	Snow-mobiling	ATV Riding	Cross-Country Skiing
Hunting	X									
Camping		X								
Mountain Biking			X							
Linear Trial Biking				X						
Wildlife Watching					X					
Hiking						X				
Horseback Riding							X			
Snowmobiling								X		
ATV Riding									X	
Cross Country Skiing										X

Recreational Use Conflict – WATER based

Rank on a scale of 1 (antagonistic) to 10 (fully complementary), 7 is neutral interaction (supplemental).

What happens when ?

From the perspective of people who are ↓:	Fishing	Motorboating/ Water Skiing	Jet-Skiing	Sailing	Canoeing/ Kayaking	Swimming
Fishing	X					
Motorboating/ Water Skiing		X				
Jet-Skiing			X			
Sailing				X		
Canoeing/ Kayaking					X	
Swimming						X

Activity Definitions

Land-Based

Hunting – An activity involved in pursuing, shooting, and attempting to capture wild birds or animals while employing any device commonly used to cause injury to wildlife.

Camping - An activity involving overnight stays in a tent, primitive structure, travel trailer or recreational vehicle at a campsite.

Mountain Biking - An activity involving the riding of bicycles off of paved roads. It is an individual sport performed on dirt roads, fire roads, access roads, park trails and mountain trails.

Linear Trail Biking – An activity of riding bicycles on defined separated trails which can included abandoned railroad beds or other purposely built trails.

Wildlife Watching – An activity of non-consumptive wildlife-related recreation that includes observing, photographing, and feeding of fish and wildlife.

Hiking – An activity involving walking, undertaken with the specific purpose of exploring and enjoying the outdoors. It usually takes place on trails in undeveloped areas with relatively unspoiled scenery.

Horseback Riding – An activity that involves the riding of horses that may include riding for practical purposes (e.g. herding animals on a ranch), outdoor recreation, and sporting events.

Snowmobiling – A motorized activity using a snowmobile (or snow scooter) propelled by one or two rubber tracks, with skis for steering on snow or ice that can be used on snow and frozen lakes.

ATV Riding – An activity using an engine-driven device which has a net weight of 900 pounds or less, a width of 48 inches or less, and equipped with a seat designed to be straddled by the operator designed to travel on 3 or more low-pressure tires and used on a variety of natural surfaces.

Cross Country Skiing – An activity involving the use of cross-country skis done for adventure and/or fitness and competition usually done on snow groomed trails or across landscapes.

Water-Based

Fishing – An activity that involves the pursuit and capture of fish for subsistence and/or recreation. This activity uses a diverse range of approaches including large open-water trawling to simple shoreline casting.

Motorboating/Water Skiing - An activity that requires a vessel other than a sailboat or personal watercraft, propelled by an internal combustion engine driving a jet or a propeller that can be used to carry or pull humans.

Jet Skiing – An activity that requires a motorized vessel less than 15 feet in length designed to be operated by a single person sitting, standing or kneeling rather than within the confines of a hull.

Sailing – A non-motorized activity that involves using the wind for the control of a ship or boat across a body of water.

Canoeing/Kayaking - A non-motorized activity of paddling a small boat that can be enclosed or open for recreation or travel.

Swimming - A non-motorized activity in which humans move themselves through water in a method using arms and legs but not involving simply walking on the bottom.

Recreation Use Conflict – Mitigating and Compounding Factors (Land-Based Only)

* = mitigating factor   **# =** compounding factor   **? =** may be mitigating or compounding (often dependent on crowding)

THIS USE ...	*vs. THIS USE* Hunting	Camping	Mountain Biking	Linear Trail Biking	Wildlife Watching
Hunting	X	* degree of separation ? share facilities	* degree of separation (scale) ? style of hunting	* degree of separation (scale)	# political advocacy (limiting hunting) ? style of hunting
Camping	* previous hunting experience * degree of separation (scale) ? values related to hunting ? share facilities	X	? share facilities	? share facilities	* similar terrain # political advocacy (wilderness locations)
Mountain Biking	* degree of separation (scale) ? style of hunting # proximity (noise)	? share facilities	X	* share facilities	* similar terrain # political advocacy
Linear Trail Biking	* degree of separation (scale) # proximity (noise)	? share facilities	* share facilities	X	* similar terrain
Wildlife Watching	* degree of separation (scale) ? style of hunting # values # proximity (noise)	* degree of separation (scale) # style of camping (level of mechanization) # camper demographics	* degree of separation (scale) ? share facilities # crowding	* degree of separation (scale) ? share facilities # crowding	X
Hiking	* degree of separation (scale) * similar landscapes ? style of hunting # values # proximity (noise)	? share facilities # style of camping (level of mechanization)	* similar terrain * degree of separation (scale) ? share infrastructure # experience level # speed difference	? share infrastructure	* similar terrain # political advocacy
Horseback Riding	* degree of separation (scale) ? style of hunting # values # proximity (noise)	# experience around horses	# experience level	* similar viewscape needs ? share infrastructure needs # experience level	* similar terrain # political advocacy
Snowmobiling	* share infrastructure (country roads and trails)		* similar terrain * share infrastructure	* share infrastructure (trails) * similar terrain	# political advocacy
ATV Riding	* share infrastructure (country roads and trails)		? share facilities # crowding		# political advocacy
X Country Skiing	* degree of separation (scale) ? style of hunting # values # proximity (noise)		* share facilities	* share infrastructure (trails) * similar terrain	* similar terrain ? share infrastructure

THIS USE ...	Hiking	Horseback Riding	Snowmobiling	ATV Riding	X Country Skiing
Hunting	* similar terrain ? style of hunting ? share facilities # political advocacy (limiting locations)		* similar terrain ? share infrastructure # proximity (noise)	* similar terrain ? share infrastructure # proximity (noise)	* similar terrain * share infrastructure ? style of hunting
Camping	? share facilities	* degree of separation (scale)	* share infrastructure	* degree of separation (scale) ? share facilities # proximity (noise)	* share facilities
Mountain Biking	* degree of separation (scale) ? share infrastructure # crowding	* degree of separation (scale) # speed differences	* similar terrain * share infrastructure	* degree of separation (scale) # proximity (noise) # trail damage # speed differences # different infrastructure needs	* share infrastructure (seasonally) * share facilities (seasonally)
Linear Trail Biking	* similar viewscapes ? share infrastructure # speed difference	* similar viewscapes ? share infrastructure # crowding # speed difference	* share infrastructure (seasonally)	* degree of separation (scale)	* share infrastructure (seasonally) * share facilities (seasonally)
Watching Wildlife	* similar terrain * degree of separation (scale) # crowding	* similar terrain * degree of separation # crowding	* degree of separation (scale) # proximity (noise)	* degree of separation (scale) # proximity (noise)	* similar terrain * degree of separation # crowding
Hiking	X	* similar viewscapes ? share infrastructure # trail damage	* similar terrain ? share infrastructure # proximity (noise) # speed differences	* similar terrain * degree of separation (scale) # trail damage # speed differences # proximity (noise)	* similar terrain * share infrastructure
Horseback Riding	* similar terrain * similar viewscapes ? share infrastructure # startling	X	* share infrastructure (seasonally)	* similar terrain * degree of separation (scale) # proximity (noise)	* share infrastructure (seasonally)
Snowmobiling	* similar terrain * degree of separation (scale) * share infrastructure (seasonally)	* share infrastructure (seasonally)	X	* share infrastructure (seasonally)	* similar terrain * degree of separation (scale) ? share infrastructure # speed differences
ATV Riding	* similar terrain * degree of separation (scale)	* similar terrain * degree of separation	* share infrastructure (seasonally) # shoulder season trail damage	X	* share infrastructure (seasonally)
X Country Skiing	? share infrastructure # damage set tracks	* share infrastructure (seasonally)	* similar terrain * degree of separation (scale) ? share infrastructure # speed differences # proximity (noise)	* similar terrain and scenery ? share infrastructure (seasonally) # shoulder season conflict # trail damage	X