Outdoor recreation is on the rise globally as people have more leisure time, greater mobility and more disposable income (Itami & Gimblett 2001). There are new types of recreational activities available with different environmental requirements and at times conflict with more traditional activities (Itami & Gimblett 2001). Perceived differences in motives, attitudes and values among recreational visitors have been shown to cause conflict (Saarinen 1998). Therefore, as larger numbers of increasingly diverse groups of people head out to public lands to enjoy more and more diverse recreational activities, managers must realize that conflict is inevitable but that it can be managed (Ivy et al. 1992).

Conflict is broadly defined as goal interference attributed to another’s behavior (Jacob & Schreyer 1980; Ivy et al. 1992; Watson, A.E. 2001). This definition requires that the individual experiencing the conflict blame another for the goal interference (Ivy et al. 1992) and that people recreate to achieve certain outcomes (Jacob & Schreyer 1980). In this case, a goal is defined as any preferred social, psychological or physical outcome of behavior that provides incentives for that behavior (Ivy et al. 1992). Conflict can be experienced through a direct encounter (when a horseback rider and backpacker meet on a trail) or indirectly (through the secondary effects on another party’s behavior) (Ivy et al. 1992). Conflict can also be symmetrical (both groups feel conflict towards each other) or
asymmetrical (one type of user perceives conflict resulting from the actions of a second type of user, but not vice versa) (Jacob & Schreyer 1980; Ivy et al. 1992).

Recreational conflicts intensify when an increasingly diverse mix of social, cultural, and political interest groups lay claim to what they perceive to be their fair share of a public resource (Dustin et al. 2002). This is due, in part, to perceived dissimilarity of attitudes and values associated to activities of different user groups (Ivy et al. 1992; Watson 2001). Four major factors have been identified as having the potential to produce conflict when there is social contact (knowledge of another’s behavior) between recreational users: activity style, resource specificity, mode of experience and lifestyle tolerance (Jacob & Schreyer 1980). If resource managers recognize these factors as potential sources of conflict before they occur, conflicts between user groups could be proactively managed (Jacob & Schreyer 1980).

Conflict occurs when people have different personal meanings attached to the set of behaviors constituting a recreation activity (activity styles); it is the personal meanings and not the activities themselves that causes the conflict (Fege et al. 1989). Activity style can be characterized by three concepts: central life interest, status and evaluations of quality (Jacob & Schreyer 1980). If recreational activity is a central life interest to the user, their identity and satisfaction with life are intimately tied to participation in the activity (Jacob & Schreyer 1980). Others’ commitments are less intense; less importance is attached to a particular activity and if conditions prevent participation, another can be substituted without consequence (Jacob & Schreyer 1980). The more intense the activity
style, the greater the likelihood of conflict resulting from a social interaction with less intense participants (Fege et al. 1989).

Conflict also occurs between participants who do not share the same status hierarchies; status-conscious people depend on visible demonstrations of skill and equipment whereas others define recreation as a private affair and disregard the importance of status (Fege et al. 1989). Conflict occurs because the private activity style participants disregard status symbols thereby negating the relevance of the other person’s status hierarchy (Fege et al. 1989). This is often a source of conflict between experienced, well-equipped backpackers and day hikers who share the same trails (Fege et al. 1989).

Expectations are an important component to goal-oriented recreational behavior (Ivy et al. 1992) and the potential for conflict increases as expectations become more specific (Fege et al. 1989). More experienced users have more stringent definitions of what constitutes a high-quality experience and are more sensitive to the behavior and presence of others (Jacob & Schreyer 1980).

Resource specificity is the importance an individual attaches to the use of a particular recreational resource (Jacob & Schreyer 1980). The same three factors influence the ways people feel about the resource: central life interest, status and expectations of quality (Jacob & Schreyer 1980; Fege et al. 1989). A person well acquainted with a place has strict expectations about the variety and type of experiences to be found there and hold others to the same standards. Conflict results when users with a possessive
attitude towards a resource confront users perceived as disrupting traditional uses and behavioral norms (Jacob & Schreyer 1980).

People with intense feelings of identification with a given recreation setting are often more sensitive to the behaviors of others in those environments (Schreyer 1990). To status-conscious users of a resource, low-status users symbolize a devaluation of an intimate relationship they perceive themselves with having with the place (Fege et al. 1989).

The importance one places on a place is heavily based on past experiences (Schreyer 1990), which give people a sense of what a resource should offer and how it should be used (Jacob & Schreyer 1980). Persons with new and differing values may constitute a threat to experienced users’ established relationship with and definition of a given recreation place (Schreyer 1990). Conflict occurs when a person who views the place’s qualities as unequaled confronts someone they feel is denigrating the value of the resource (Jacob & Schreyer 1980).

Mode of experience is the sensory interaction a user has with the natural environment and can be described as a continuum ranging from unfocused to focused (Jacob & Schreyer 1980). Some sensory stimuli are more prone to interference than others and the presence of one stimuli can pre-empt sensing another (Jacob & Schreyer 1980). Someone in the “unfocused” mode takes in the entire landscape and the feeling of freedom and spaciousness they gain from it; movement and viewing the scenery are crucial recreation
goals to this group of users (Fege et al. 1989). Those in the “focused” mode pay close attention to their immediate environment; an intimate knowledge of place is central to their experience (Fege et al. 1989). When a person in the focused mode interacts with a person in the unfocused mode, conflict can result; the greater the gap between the two recreationists along the continuum, the greater the potential for conflict (Jacob & Schreyer 1980). For example, a bird watcher can not hear birds when people are using motorized equipment in their vicinity.

The last of the four factors behind recreational conflict is lifestyle tolerance: the tendency to accept or reject lifestyles different from one’s own (Jacob & Schreyer 1980). People typically form recreational groups with others who share the same goals, values and personal philosophies (Fege et al. 1989) because few people seek a recreation association that challenges and contradicts their basic values (Jacob & Schreyer 1980). Unwillingness to share resources with members of other lifestyle groups is an important source of conflict in outdoor recreation (Jacob & Schreyer 1980). Conflicts caused by intolerance for lifestyle diversity indicate that basic societal clashes make their way into recreational settings (Jacob & Schreyer 1980). These clashes are not only between people of different races, ethnicities and social classes but also occur between activity modes; stereotyping another’s mode of experience causes one group to perceive their own activity as more worthwhile than that of another (Jacob & Schreyer 1980). Conflicts are common between motorized and non-motorized users because each type believes its own use is the best way to interact with a landscape. If differences are evaluated as
undesirable or a potential threat to recreation goals, conflict results when members of the two groups confront one another (Jacob & Schreyer 1980).

Understanding conflict is very important in the effort to provide quality recreation experiences (Jacob & Schreyer 1980). Recreation resource managers and planners need to understand the diversity of persons visiting their resource, the different needs and goals they are each pursuing, the expectations they have of the resource to attain their goals and the consequences of people interacting with others who have different agendas (Schreyer 1990). Identifying the conflict potential of different users based on the four major factors causing conflict can provide insight into the behaviors and expectations of visitors (Fege et al. 1989).

Different methods of studying visitor use and conflict have been proposed in the literature, each with different management implications. The concept of recreation carrying capacity is popular with some researchers to determine appropriate levels of use for an area while maintaining a sustained quality of recreation (Stankey et al. 1990) but it is a geographical concept meaning it is always associated with a specific area (Saarinen 1998). In addition, the concept of recreation carrying capacity is based upon judgments about likely human experience outcomes, which may depend on the past experience and cultural background of those making the judgments. Thus, it can not be measured directly from the physical, phenomenal environment, but rather assessed from the behavioral environment (Saarinen 1998).
Other researchers use studies of visitor “satisfaction” in an attempt to understand the behaviors of visitors; however, there is a tendency for visitors to downplay conflict in order to maximize personal satisfaction, which suggests that measuring satisfaction alone is not a reliable indicator of user conflicts (Jacob and Schreyer 1980). Studying the effects of conflict situations on subsequent recreation experiences may provide a clearer picture of the relationship between conflict and satisfaction (Jacob & Schreyer 1980).

The U.S. population is a very diverse collection of sub-cultures with a wide variety of values and preferred recreational activities (Schreyer 1990). As public interest in recreation grows and new technologies evolve, the range of recreational activities and styles of participation appear to expand exponentially; and with them so do the potentials for conflict (Schreyer 1990). Studying visitor characteristics (age, gender, education level, socio-economic status and so on) may provide the strongest indication of the attitudes and values associated with outdoor recreation experiences (Watson 2001). This idea goes hand-in-hand with the lifestyle tolerance principle: as increasingly diverse people are using the same resource, the bigger the opportunity for conflict to arise between user groups.

Six reasons have been identified to describe the main motivations for recreation: desire to escape, desire to socialize, drive for competence, search for meaning, desire for spirituality and an opportunity for natural stimulation (Fege et al. 1989). With these in mind, another method resource managers can use is to identify the potential for conflict by asking these three questions: 1.) what wilderness experiences are visitors seeking? 2.)
What are the sources of conflict and where are they occurring? 3.) Which conflict-producing factors can wilderness managers influence, if any, to reduce conflict in a specific situation? (Fege et al. 1989).

One widely used method to control conflict is by use of the Recreation Opportunity Spectrum (ROS) to spatially separate disparate groups of users (Ivy et al. 1992). ROS is a framework designed for outdoor recreation managers who must answer questions concerning both the allocation and management of recreation opportunities (Clark & Stankey 1979). This framework allocates recreational areas along a range of conditions, from modern and developed to primitive and undeveloped (Clark & Stankey 1979). Some non-recreational uses (grazing, mining, logging) can severely conflict with opportunities for recreational experiences (Clark & Stankey 1979). For example, Stankey (1973) found that grazing in the Bridger Wilderness in Wyoming was the most serious source of conflict reported by visitors. Planners and managers must consider the lasting effects of resource activities (mines, clearcuts), as well as short-term effects (logging trucks, noise from a mine) to determine the impacts on the recreational opportunity (Clark & Stankey 1979). In general, in large areas managed for recreational purposes, managers and planners should consider the spatial distribution of incompatible opportunities so that conflict can be minimized (Clark & Stankey 1979).

Realistically, planners and managers often do not have the flexibility necessary to spatially separate conflicting recreational opportunities due to previous management decisions, other resource uses, established recreational use or any variety of factors that
can complicate management (Clark & Stankey 1979). The best management strategy is proactive determination of recreational opportunities, existing and proposed, so that potential conflicts can be identified before they happen (Clark & Stankey 1979).

To further investigate recreational conflict I will turn to examples in Prince William Sound (PWS), Alaska. PWS is located almost entirely in the Glacier Ranger District of the Chugach National Forest (CNF) in South Central Alaska. CNF was created in 1907 by the Proclamation of President Theodore Roosevelt. Fish, wildlife and recreation/tourism have always been and continue to be the major resources and uses of this area and represent its greatest potential for beneficial future management (Bschor 2002). Although there is little empirical evidence, three main types of conflict are perceived to exist in PWS: hunters vs. non-hunters (non-harvest users), subsistence users vs. recreational users and human-wildlife conflicts.
The USFS has received several reports of user conflicts in the western Sound between bear hunting groups and other non-harvesting users of the shoreline (Gimblett & Lace 2005). These conflicts are exacerbated by the practice of bear baiting; a technique used by hunters to lure bears to a specific location (Gimblett & Lace 2005). Many bait stations are established on beaches that may also be used by non-harvest users (Gimblett & Lace 2005). As a result of conflict and human safety concerns, Alaska Department of Fish and Game (ADF&G) has eliminated bear baiting from two popular recreation areas (Gimblett & Lace 2005). In Alaska, subsistence generally refers to the practice of taking fish, wildlife or other wild resources for one's sustenance - for food, shelter or other personal or family needs.

Before delving into conflict related to subsistence users in PWS, a brief political history of subsistence in Alaska will give rationale to the passionate views held by all groups involved. Except where otherwise noted, this history is synthesized from information provided by one source: Subsistence Management Information (SMI) 2006.

Subsistence has been part of Native Alaskan culture for thousands of years and has also become a way of life for many non-Natives in Alaska. Subsistence is recognized by the United States and by the State of Alaska as the highest-priority consumptive use of resources in the state. Subsistence hunting and fishing provide a large share of the food supply in rural Alaska; according to the state Division of Subsistence in Anchorage, about 44 million pounds of wild foods are taken annually by residents of rural Alaska. This compares to 22 pounds per year harvested by Alaska's urban residents. According to
the state, fish comprise 60 percent of subsistence foods taken annually; ninety-five percent of rural households consume subsistence-caught fish.

Subsistence is a controversial political topic because managing subsistence involves making decisions about who has access to Alaska's fish and wildlife resources. Disagreements about subsistence arise between and within groups, including urban and rural Alaska residents, Natives and non-Natives, subsistence users and non-subsistence users, state lawmakers and other groups. Disagreements include who should get rights to subsistence, how resources are allocated under subsistence provisions, and how such decisions are made.

Subsistence was not a controversial legal issue until the late 1970s, when demands of a growing state population started to put pressure on Alaska’s available fish and game, and resource managers increasingly were forced to choose between users. In 1971, an act called the Alaska Native Claims Settlement Act (ANCSA) disposed of 44 million acres of land and dispensed nearly $1 billion to Natives; the Act also entitled Natives to a perpetual 2% royalty on mineral leases owned by the federal government at the time of statehood (Tanner 2004). However, Native Alaskans also had to agree to absolve all current filings and cease further filing of land claim suits against the state of Alaska (Tanner 2004). The Alaska National Interest Lands Conservation Act (ANILCA), 1980, was the first federal subsistence law and mandated that the state maintain a preference for subsistence hunting and fishing for rural residents on federal, public lands. ANILCA also created new national wildlife refuges and public recreation lands. This law introduced
new management issues to all federally owned lands in Alaska, as it required managers to accommodate subsistence users in all management guidelines.

Realizing that federal subsistence fisheries management would impact fishing statewide, the State of Alaska attempted to regain management (USFW 2006). They fought a strong battle, but in the end, the Alaska Senate failed to pass a constitutional amendment that would bring state law into compliance with ANILCA (USFW 2006). Consequently, on October 1, 1999, the rural subsistence priority was extended to inland waters within 34 federal parks, forests, wildlife refuges, preserves and recreation lands (USFW 2006).

There seems to be a lack of data related to subsistence hunting practices in relation to recreational conflict, which would be an interesting area of future research. There was a study of subsistence salmon fisheries in western PWS in which the Glacier Ranger District of CNF identified the increase of recreational anglers out of Whittier to be in conflict with subsistence users (Bullock & Miller 2004). The Glacier Ranger District also identified Otter Lake and Solf Lake (both in PWS) as future potential sites of conflict as recreational use increases (Bullock & Miller 2004).

The third type of conflict in PWS is between humans and wildlife; this includes harm inflicted on wildlife by humans and also harm inflicted on humans by wildlife. In a study of the effects of human presence in waterways near bald eagle nests, Steidl and Anthony (2000) found that human activity near nests caused consistent changes in the behaviors of
breeding eagles, suggesting that frequent human activities near nests could adversely affect nesting survival and therefore reproductive success.

The March 1989 Exxon Valdez oil spill (EVOS) caused enough damage to the wildlife and natural systems of Prince William Sound to fill a book. Almost two decades after EVOS, it is clear that some resident species injured by the spill have not fully recovered (EVOSTC 2006). The EVOS Trustee Council recognizes 30 resources and services as injured. Among the species most affected were seabirds, which are affected by a variety of human activities like oil pollution and commercial fishing (Hatch & Piatt 2006). Alaskan populations account for more than 95% of the breeding seabirds in the continental United States, and eight species nest nowhere else in North America (EVOSTC 2006). For example, the Common loon, *Gavia immer*, is still listed as “not recovered”; carcasses of 395 loons of four species were recovered following the spill, including at least 216 Common loons (EVOSTC 2006).

Many sea mammal populations are still affected by EVOS. Harbor seal numbers were declining in the Gulf of Alaska and PWS before the oil spill (EVOSTC 2006). EVOS affected harbor seal haul-out areas and adjacent waters in PWS and as far away as Tugidak Island, near Kodiak (EVOSTC 2006). Estimated mortality as a direct result of the oil spill was about 300 seals in oiled parts of PWS (EVOS 2006). Based on aerial surveys conducted before (1988) and after (1989) the spill, seals in oiled areas declined by 43 percent, compared to 11 percent in unoiled areas (EVOSTC).
In addition to wildlife impacts, EVOS affected recreation and tourism in PWS (EVOSTC 2006). Resources important to recreation were injured and beaches used for recreational activities were oiled (EVOSTC 2006). Recreation was also affected by changes in human use in response to the spill (EVOSTC 2006). For example, displacement of use from oiled areas to unoiled areas, particularly in the years immediately following the spill, increased management problems and facility use in unoiled areas (EVOSTC 2006).

The final example of human-wildlife conflict in PWS is between humans and bears. Many bear-human conflicts have occurred in Alaskan parks and refuges, resulting in area closures, property damage, human injury and loss of life (Smith et al. 2003). Human activity in bear country has also had negative and substantial consequences for bears: disruption of their natural activity patterns, displacement from important habitats, injury, and death (Smith et al. 2003).

In Chugach National Forest, the Alaska Department of Fish and Game (ADFG) manages harvests of brown bear so the 3-year average of human-caused mortalities does not exceed 20 total bears, nor exceed 8 female bears older than 1 year (ADFG 2006). Human-caused mortality include defense of life and property kills, automobile collisions, illegally taken brown bears, hunter kills, and management related deaths (ADFG 2006).

It is unfortunate for both people and bears when conflicts occur; fortunately, however, solutions exist for reducing, and in some instances eliminating bear-human conflict (Smith et al. 2003). Just like understanding recreational conflict between humans, the
The first step to devising a solution to bear-human conflict is to understand the abundance and density of bears in recreational areas and the areas where conflicts are occurring (Smith et al. 2003). Bears are not randomly distributed across the terrain; the temporal-spatial pattern of bear use is largely a function of seasonal forage quantity and quality (Smith et al. 2003). If this assumption is correct, an assessment of bear habitat quality at campsites should provide a relative index of the amount of seasonal bear activity at those sites (Smith et al. 2003). If campers avoid areas seasonally important to bears, the number of bear-human encounters should decline and the chance of an encounter escalating to conflict (i.e., people and bears interact) can be modified by campsite characteristics that reduce the ability of bears and people to detect each other (Smith et al. 2003).

As long as recreational visitors continue to visit public lands, conflict is inevitable (Ivy et al. 1992). But conflict can be managed if the potential for conflict is recognized at a stage where preventative actions may be taken (Jacob & Schreyer 1980). Treating conflict as goal interference makes it the duty of managers and planners to more clearly understand the goals pursued by people using public resources and how the interactions of different types of users may impact the attainment of those goals (Schreyer 1990).
LITERATURE CITED


