

Recreation and Tourism in South-Central Alaska: Synthesis of Recent Trends and Prospects

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Abstract

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Tourism has been the fastest growing component of Alaska's economy for the past decade and is an important export sector for the regional economy. Opportunities to participate in outdoor recreation are also an important component of the quality of life for residents of Alaska. Successful planning for the Chugach National Forest therefore will require an understanding of (1) recreation and tourism as an economic sector, (2) factors contributing to growth in recreational activity in south-central Alaska, and (3) prospective future levels and types of demand for recreation. By using a sectoral analysis framework, various data sources reveal similar trends and patterns of activity. Recreation demand models, based on cross-sectional data, illustrate the importance of demographic and economic factors as determinants of demand. Implications for management and planning include the need to understand whether and when management actions to increase the recreation services on forested landscapes conflict with other management objectives, such as maintaining or enhancing wildlife habitat.

Recreation and tourism in south-central Alaska likely will continue to grow, although future growth rates may be slower than those in the early 1990s. Although the demographic and economic characteristics of the population of Anchorage are similar to those of the lower 48, patterns of recreation (activities and frequency) differ across residents and nonresidents. Based on both recreation demand models and key respondent interviews, the fastest growth in demand likely will be in viewing wildlife and scenery and in "soft-adventure" activities that offer a combination of comfort and outdoor recreation-based excitement. The increasing importance of recreation and tourism presents challenges for communities as well as resource managers in Alaska.

Keywords: Alaska, Chugach National Forest, recreation, tourism, growth trends.

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Introduction

Opportunities to participate in outdoor recreation are an important component of the quality of life for residents of Alaska. Tourism—much of it directly dependent on natural resources, especially forests—has been the fastest growing component of Alaska's economy for the past decade and is an important export sector for the regional economy (Alaska Department of Commerce and Economic Development 1999, Parks 1999). It is not surprising, therefore, that recreation and tourism on the Chugach National Forest have increased substantially over the last 20 years and are now important considerations in forest policy. To successfully plan future management of the Chugach National Forest, it is important to understand (1) the factors contributing to growth in recreation and tourism activity in south-central Alaska, (2) the composition and structure of the recreation and tourism sectors, and (3) prospective future types and levels of demand.

Two studies were commissioned in support of the Chugach National Forest land management planning effort. Colt and others (in press) takes a sectoral approach to the examination of patterns and trends in recreation and tourism in south-central Alaska. Using various data sources, along with structured interviews, they develop a detailed picture of recent trends and describe prospective future developments in the sector. Bowker (in press) complements this sectoral analysis by providing a formal, model-based analysis of recreation demand in Alaska, by activity. Bowker's (in press) application of well-established models to Alaska data provides a quantitative framework for projections to accompany the qualitative, interview-based views of the future of recreation and tourism in south-central Alaska. Together, these reports establish a factual and analytical basis for understanding some of the policy and management choices on the Chugach National Forest associated with recreation and tourism on the forest.

This report highlights the findings of Colt and others (in press) and Bowker (in press), places these findings in a larger context, identifies both links and gaps in the information they provide, and draws broad-scale conclusions. It synthesizes these two primary studies in the context of emerging concerns about the role of recreation and tourism as drivers of economic and social change. Together, these provide a foundation for assessing the role of the Chugach National Forest as a provider of recreation opportunities and scenic landscapes in south-central Alaska.

Shortcomings of the two studies on which this synthesis is largely based are that they do not (1) directly address the management plans of adjacent owners (both public and private), (2) provide an analysis of supply (capacity), and (3) incorporate information on the effect of quality (of experience) on demand (and, correspondingly, the effects of levels of demand on the quality of experience).¹ Among the contributions of a synthesis, however, is the identification of such gaps and, where possible, the extensions and interpretations that will bridge these gaps. These shortcomings, however, are not unique to this effort, or to examination of recreation and tourism in Alaska. Rather, these are widely shared inadequacies of recreation research in general (Burchfield and others 2000). Given these limitations, this work meets the need for a contemporary review of trends and prospects for this sector.

¹ These are issues raised in the analysis of the management situation (USDA Forest Service 1999).

Background and Context

Recreation and Tourism² as Economic Opportunity

Recreation and tourism are more than just fun: they are both big business and an often-cited component of individual well-being. In terms of economic importance, travel and tourism are estimated to account for more than 10 percent of world economic activity; in the United States, travel and tourism are estimated to account for more than 12 percent of gross domestic product, and more than 13 percent of employment (World Travel and Tourism Council 1999). In rural communities of the interior Western United States, the recreation sector contributes 4.5 percent of the direct employment, slightly more than the traditional commodity industries (Crone and Haynes 1999). The importance of recreation and tourism in Alaska reflects similar patterns.

In Alaska, visitors spend about \$1 billion a year (Alaska Department of Commerce and Economic Development 1999), and tourism has been described as the “second largest industry” in the state (Egan 2000). Although the importance of recreation and tourism is widely acknowledged, estimates of the scale and relative importance of these activities continue to be debated—largely because recreation and tourism are not “conventional” economic sectors with routinely reported statistics (Smith 1998).

Seasonal tourism was one of the few sectors of Alaska’s economy that expanded in the 1990s, a period when Alaska’s economy as a whole stagnated (Goldsmith 1999, Parks 1999). Goldsmith (1997) traces the sustained performance of tourism in Alaska’s economy as far back as when Alaska became a state. The growth of recreation and tourism as an economic sector in Alaska may present opportunities for some communities to adjust to reductions in production and employment in timber and other commodity sectors. In some cases, recreation and tourism have long been underrecognized components of the natural resource-related economy. The difficulty of establishing precise definitions and the absence of consistent, explicit data on recreation and tourism as an economic sector complicates efforts to understand the economic dimensions and dynamics of these activities.

Although the recreation activity of residents does not, in itself, bring additional income into local economies, recreation opportunities and environmental amenities are often significant factors in determining migration (including the selection of retirement and second homes) and tourism. Consequently, resource management for amenity and recreation services likely will affect both the size and structure of the local economy. Equally important, tourism (recreation by nonresidents) is often an export sector for local and regional economies. That is, tourism is part of the economic activities that provide new employment and income on which the “secondary” component of the local economy depends. There are, however, divergent views on what constitutes the “base” of an economy.³ There is also uncertainty (and dispute) over the effects of land management activities on local economic structure.

What is important is that the net economic benefits of tourism, such as creation of jobs, are comparable in principle to traditional economic “base” industries. There are obvious and possibly significant differences (as compared to commodity-based industries) in,

² In this document we use the term “recreation” to refer to outdoor leisure activities engaged in by Alaska residents; we use the term “tourism” to refer to the same activities when the participants are not residents of Alaska.

³ See Crone and others (1999) for a discussion of different perspectives on definitions of economic base.

Recreation and Tourism as a Component of Social Change

among other things, wages paid and skills required. But part of the growing awareness of changing social and economic conditions is acknowledgment of how economies have broadened and the need to understand the dynamic determinants of change. Recreation and tourism are an important component of the economic dynamics of Alaska.

For example, some communities facing declining comparative advantage in commodity production may have (or be able to develop) comparative advantage in supplying the services associated with recreation and tourism. Foreseeable changes in demographics, technology, and broad-scale economic conditions make it possible to imagine sustaining—or even substantially increasing—the contribution of recreation and tourism to state and local economies in the West.

Although the economic opportunities associated with recreation and tourism are important, especially for some rural communities, these opportunities differ widely. The scale and distribution of the economic benefits of this sector are not well understood. In the short term, any source of economic growth is typically welcome. Over the longer term, however, increasing dependence on recreation and tourism may simply replace the cycles and impacts of commodity production and extraction-based industries with a different set of challenges, both for communities and for forest management and policy (see, for example, Egan 2000, Power 1996).

The increasing importance of recreation and tourism to communities—especially tourism—presents social challenges that accompany the economic opportunities. Changes in the structure of local economies, and greater dependence on the provision of services (often in place of employment in extractive industries and manufacturing) contribute to fundamental changes in social conditions at the community scale. Some of these changes are due to broad-scale trends; others are closely related to specific natural resource management policies and decisions. As compared to commodity goals for forest management, recreation and tourism may present greater challenges for collaborative decisionmaking and management. Whereas sustained commodity production is assumed to be synonymous with community stability, sustained policy and management support for recreation and tourism may contribute to profound and unwelcome changes in communities.

For example, an emphasis on providing recreation services from forests may satisfy local goals for amenities and services, but increasing tourism (nonresident recreation) may lead to conflicts or reductions in the quantity or quality of services for residents. Recreation and tourism development presents multiple pathways for most communities, and in few cases will these paths provide equivalent—or identically distributed—benefits. The policy and management challenges for federal resource management agencies are at least as complex as those associated with management for commodity production. Consideration and comparison of local, regional, and national interests, in the context of broad-scale policy objectives—as well as national and international trends—are required, but the metric for doing this is unclear.

It is difficult to describe and quantify how individual perceptions of well-being are affected by the quantity and mix of opportunities for leisure activities and the tradeoff (if any) with opportunities for other types of economic development. We know that environmental aesthetics and opportunities to appreciate them are important components of well-being and that there is a wide range of preferences associated with management for aesthetics (see McCool and others 1997). Environmental aesthetics include scenery and associated opportunities to recreate in natural resource-based settings.

Recreation and Tourism as a Forest Management and Policy Concern

Considerable evidence, including survey data, suggests that quality of life issues are taken seriously by many residents of Alaska. Forest management, therefore, is further challenged to satisfy complex, often intangible, but nevertheless critically important social objectives.

Increasing recognition of the economic and social importance of recreation and tourism must be accompanied by recognition of the need to formulate and evaluate public policies affecting this sector and its prospective future development. National forests have long been recognized for their role in providing opportunities for various outdoor recreation activities. In the United States as a whole, and especially in the West, national forests are a dominant provider of various nature-based, dispersed recreation services. In many ways, the Chugach National Forest fills this niche in south-central Alaska.

For the national forests as a whole, growth in demand for recreation services has been sustained for more than 50 years. Recreation now accounts for most of the contribution national forests make to the national economy (see, for example, Niemi and Fifield 2000). In south-central Alaska, the visitor industry accounts for a considerable share of employment in industries that use forest-related resources (Crone, n.d.). Nevertheless, increased attention needs to be given to the interaction among forest policy and management and the growth and development of recreation and tourism.

There is a wide range of possible goals for national forest policy related to recreation and tourism and an equally wide range of possible effects of management. Forest policies affect types, locations, and levels of recreation use; they also affect large- and small-scale investments in various recreation- and tourism-related businesses. Consequently, these policies will affect both human communities and forest ecosystems. To be effective, forest planning should consider recreation and tourism as an economic sector and as a social activity.

In both the short and long term, forest policies and management have affected the timing and direction of many of the economic adjustments associated with recreation and tourism. Some of the effects of forest policy and management have been intended, and some have been unintended. The consequences of policy and management have not been uniformly positive. Documenting this activity and its relation to natural resource conditions and management is increasingly important for sound public policymaking.

Changes in the Nature and Role of Forest Management

Federal forest management has both direct and indirect effects on patterns and trends in recreation and tourism activity. Through the provision and management of on-site facilities (including, perhaps especially, road access), and through the management of landscapes that underpin the largest categories of recreation and tourism use—viewing wildlife and scenery—the Chugach National Forest already influences levels, patterns, and types of recreation and tourism use in south-central Alaska. Although the role of public infrastructure development in recreation has been recognized for some time, only more recently has the public, resource management role related to the “physical plant” of the tourism industry (Smith 1998) been recognized. Beyond the need to incorporate and balance additional expectations, the implications for forest management and policy are not entirely clear.

Commercial recreation development associated with national forests, including both large- and small-scale entrepreneurs, has expanded rapidly in the last 20 years. The Forest Service has a long history of managing for commercial recreation development based in national forests, and the agency is in a position to facilitate, guide or, in some

The Social and Economic Context for Recreation and Tourism in South-Central Alaska

cases, limit some commercial activity through the permitting process. The Forest Service, however, lacks explicit, broad-scale goals for recreation and tourism. In addition, because the agency manages only some of the elements of the supply (some infrastructure, some access, and some of the scenery), its influence on commercial aspects of recreation and tourism development is limited.

Decisions of the private sector, including entrepreneurs and interest groups, and actions of other public agencies will significantly effect the goals and success of Forest Service management related to recreation and tourism. At all levels of management, the Forest Service must consider policy and management objectives for recreation and tourism with an understanding of the goals and objectives of other public agencies and the private sector—as well as likely developments in the sector. However, the scale, rapid growth, and increasing complexity of recreation and tourism activities, present considerable, and often new, challenges to forest managers.

The ability to understand and manage human behavior may be the most significant challenge for forest management and policy in managing recreation and tourism. Although management of landscapes and ecosystems will be among the tools used to accomplish policy goals, this must be complemented by the use of diverse management tools that directly manage human behavior and activity. Broad, quantity-based, and largely passive management objectives—such as “meeting the needs of as many of the recreating public as possible”—are not sufficiently informative in terms of management direction, and do not assist in the identification of the policy tools that are needed, or specific choices that must be made.

Ideally, managers will understand whether and how to manage and direct the level, location, and type of recreation activity; they must understand what mechanisms (such as prices, permits, regulations, etc.) are likely to be both effective and socially acceptable. In addition, it will be important to understand whether and when management actions to increase recreation services of forested landscapes conflict with other management objectives, such as maintaining or enhancing wildlife habitat.

An examination of recreation and tourism in south-central Alaska is closely linked to the assessment of social and economic conditions. First, recreation and tourism represent an important component of the quality of life for individuals and communities in Alaska. The high rates of participation in outdoor recreation by Alaskans (see the next section) indicates that the quality of life and nature of community is defined, in part, by the quantity and quality of local recreation opportunities.

Second, recreation and tourism are significant areas of economic activity. The economic importance of industries using forest-related resources⁴ differs across south-central Alaska; however, the visitor industry accounts for at least one-third to one-half, and in some cases nearly all, employment in this industry group (see Crone, n.d.). For at least a decade and perhaps dating back as far as statehood of Alaska, tourism in Alaska has been a source of sustained economic growth (Goldsmith 1997, Parks 1999).

In both demographic and economic terms, Alaska—especially south-central Alaska—is becoming increasingly similar to the rest of the United States. Nevertheless, important differences remain. Economic diversity is increasing in Alaska, including south-central

⁴ See Crone (n.d.); these industries are defined as commercial fish harvesting and seafood processing, logging and sawmills, minerals (other than oil and gas) and the visitor industry.

Analysis of Recreation Demand in Alaska

Alaska, but the local and regional economies remain relatively less diverse, and more dependent on the public sector and on commodity industries. For the past decade, however, much of the increase in employment in Alaska (as for the rest of the United States) has been in services and retail trade; some portion of this, perhaps a significant portion, is attributable to recreation and tourism (Alaska Department of Commerce and Economic Development 1999).

Recent trends in income in Alaska diverge from those in the lower 48 states. In the early 1980s, per capita income in Alaska was nearly 50 percent higher than the national average; by the late 1990s, per capita income in Alaska was at the national average (Parks 2000). Earned income (wage income) is declining in relative importance in both Alaska and the Nation as a whole, but Alaska is relatively more dependent on transfer payments. Recognizing the importance of income as a determinant of both recreation and tourism (see Bowker and others), an implication of these broad trends is relatively faster growth in tourism as compared to recreation (leisure activities of Alaska residents).

In spite of the divergence in the relative growth of per capita income in Alaska, demographic and economic projections suggest continued growth in demand for services related to recreation and tourism (Neimi and Fifield 2000, World Travel and Tourism Council 1999). Tourism and its impacts on locations that provide related activities will continue to grow as increasingly affluent Americans seek unique outdoor recreation opportunities.

Bowker's (in press) recreation demand models and projections are necessary to the analysis of recreation and tourism on the Chugach National Forest because they provide one of the few opportunities to explicitly and directly link patterns of recreation activity in Alaska to demographic and economic trends. Data collected on Alaska as part of national studies provides some regional specificity within a broader framework. Consequently, recreation demand in Alaska can be examined in both absolute and relative (to national patterns and trends) terms. Widely available demographic and economic projections can be used to develop demand projections.

This work is not sufficient or definitive, however, because the approach is limited by the quantity and the type of data that are available. One significant limitation is the absence of destination information, or other site-specific information. Although three independent sources of data are analyzed, all are population (household) samples that do not include any information on where the recreation activity occurred.

Furthermore, because Bowker's (in press) models can be developed only for activities for which there are data (reported activities); the surveys do not allow for speculation about prospective activities. Land management planners need to be able to anticipate new activities (as well as new locations) for which there are no data. Analysis of historical data with econometric models reveals nothing about the type, timing, and location of new activities. Nevertheless, these models and the projections they support provide a reasonable, "coarse filter" for future demand by activity.

Approach

Bowker's (in press) results are based on data from two models and three national-scale surveys conducted during the mid-1990s. Two models are estimated for each broad category of outdoor recreation activity. One model shows the probability of participating in a given outdoor recreation activity at least once a year. When combined with population data, this gives a general indication of the size of a given market. The

other model measures consumption as reported in various units such as times, days, or trips in a given year. This adds “intensity” as a dimension of recreation activity. Rate of participation and consumption together, provide a broad measure of a recreation demand.

Data from the three national-scale surveys provide state-level (resident population) data related to various outdoor recreation activities. One survey also provided information about wildlife viewing by visitors to Alaska. All three surveys used probability-based sampling of households via telephone interviews; all the data sources are origin based. Although a few visitor surveys conducted on the Chugach National Forest were available, these were too narrow (in sample size, collection period, or activities surveyed) and could not be linked to household survey data or to consistent demographic and economic information.

Bowker’s (in press) models are based on the premise that individual participation in recreation activities and the level of that participation (consumption) depends on age, sex, income, and race. This approach is consistent with various published studies. The major drawback of these models when used in forecasting is that the structure of the estimated models remains constant over the forecast period. Factors that influence participation or use are assumed to have the same (relative) effects throughout the forecast period. This assumption may be weak; for example, rapid increases in some activities reflect changing tastes and preferences (among other factors) and cannot be fully explained by changes in income and demographic factors. The use of cross-section data, however, does provide a direct estimate of long-term response rates.

Results

Bowker’s (in press) results show that participation in outdoor recreation activities is a regular part of life in Alaska. Compared to the rest of the United States, a higher proportion of Alaskan adults participated in a wide range of recreation activities. For many activities, rates of participation by Alaskans are at least three times the national average. These results are confirmed by the fact that estimated participation rates for Alaskan adults are reasonably consistent across the three (independent) data sets. In the few cases where there are significant differences in results, these differences can be easily explained by differences in the wording of questions on the different surveys.

Recreation activities with the highest participation rates among Alaskan adults are⁵ driving for pleasure (86 percent), picnicking (76 percent), fishing (75 percent), bird and wildlife viewing (74 percent), and hiking (68 percent). In general, these are day-use activities that can be done in various settings, are often done in conjunction with other activities, and generally (with the exception of fishing) do not require expensive equipment or special skills. Opportunities for all of the activities are readily available on the Chugach National Forest, and evidence (see the next section) suggests that the Chugach National Forest is a significant provider of these opportunities.

The mix of activities that generate the most primary purpose trips and most time spent recreating for Alaskans is somewhat different than that for the rest of the United States. For the United States as a whole, Cordell and others (1999) report the top five primary purpose trip-generating activities as sightseeing, family gatherings, bird and wildlife viewing, biking, and picnicking. The top six activities in terms of days of participation for the United States are walking, bird watching, wildlife viewing, biking, sightseeing, and family gatherings. Although the viewing and gathering activities are similar, Alaskans

⁵ Based on the 1997 statewide comprehensive outdoor recreation plan (SCORP) survey.

engage in fishing, hiking, and off-road activities at much higher rates and intensities than people in other parts of the United States. For Alaska,⁶ the top five activities in terms of the highest, per capita averages for times of participation annually are bird and wildlife viewing (27.9), scenic driving (27.7), off-road driving (22.3), biking (22), and fishing (16.2). The total number of times adults participate in these activities ranges from almost 13 million for scenic driving and bird and wildlife viewing to over 7 million for fishing. As was the case with the participation analysis, estimates of times and primary purpose trips for Alaskan adults are highest for activities that require less specialized skill and less expense.

On a per capita basis, projections of participation in all activities are relatively flat, which is a direct consequence of the fact that there is little projected change in the explanatory variables. Although participation rates for most activities remain relatively constant, the total number of people participating will change owing to state population growth. Between 2000 and 2020, the population of Alaska is expected to increase by about 28 percent. Although these projections do not indicate the number of participants visiting any specific site, they do represent potential participants, state-wide. Prospective increases in demand for Chugach National Forest recreation services can be derived from the activities for which participation is expected to increase the most (day use, viewing wildlife and scenery, and hiking) and the proximity of Anchorage to the forest.

Among wildlife-related activities, participation by visitors (tourists) is greater than that of residents, and is expected to increase faster (based on higher rates of projected population growth in the lower 48 states). If true, for bird and wildlife viewing, tourists will outnumber Alaskans by more than 10 to 1 by the year 2020. Although not as dramatic, the growth of tourist anglers also is expected to exceed that for in-state anglers by about 50 percent.

Depending on one's perspective, these projections of growth in the number of participants in outdoor recreation in Alaska may be either cause for alarm or a reflection of the continued, even increasing, importance of recreation in the life and economy of Alaska. Two important considerations are not reflected in these forecasts: (1) participation is projected independent of any measure of supply. Where supply factors have been incorporated (for example, Bowker and others 1999), decreases in supply lead (naturally) to slower growth in participation, despite population increases. This is especially true of dispersed activities.

To date, supply of recreation opportunities has perhaps been less limiting in Alaska than elsewhere. The SCORP97 survey, however, indicates that reports of crowding in Alaska increased significantly from previous surveys. Data on crowding, however, could not be used as an explanatory variable for any of the participation activity models. Nevertheless, as crowding increases on trails, in campgrounds, and along riverbanks, some of the current participants likely will participate less. Participation in some activities is likely to be more sensitive to crowding; hunting, fishing, and backpacking, for example, are likely to be more affected by crowding than activities such as biking and picnicing.

⁶ Based on the SCORP (1997) data.

Projections of consumption to 2020 do not alter the activities Alaskans engage in most often: scenic driving, bird and wildlife viewing, biking, off-road driving, and fishing. Hiking is nearly included among the top five activities as a consequence of projected increases. The largest percentage of projected increases are expected in activities that could be broadly termed “soft adventure” such as backcountry skiing, canoeing and floating, hiking, and biking. None of the activities studied are expected to decline, in percentage or absolute terms, over the next 20 years. The smallest increases in primary purpose trips⁷ are expected in activities that could (arguably) be termed “less soft” adventure: developed camping, hunting, primitive camping, and snowmobiling.

Expected increases in primary purpose trips by Alaskans generally exceed expected increases for Americans as a whole. Among the activities with the largest differences in growth rates between Alaska and the United States over the next 20 years are backpacking, off-road vehicle use, and primitive camping. Developed camping is the only activity for which the rate of growth in primary purpose trips for the United States exceeds that for Alaska. Much of this difference can be attributed to greater growth in the Southern United States where weather is typically not a constraint on camping seasons.

Conclusions

Household survey data confirm that participation and consumption in outdoor recreation are an important part of life in Alaska. Rates and intensity of participation among Alaskans are higher than for residents of the lower 48, and these rates of participation can be expected to remain higher over the next 20 years. Projected increases in participation and consumption for most activities can be expected to keep pace with projected population growth in Alaska (roughly 1.5 percent per year over the 20-year period). The five activities that show the greatest growth in the absolute number of times Alaskans are likely to participate in them are scenic driving, biking, bird and wildlife viewing, recreational vehicle camping, and fishing. Roads and waterways, therefore, will continue to be heavily relied on for outdoor recreation.

Projections of participation and consumption assume continued availability of the sites and services that are required for the recreation activities; that is, the projections assume that existing capacities are sufficient to accommodate the demand, or that there is an expansion of supply. This is a relatively more reasonable assumption for some activities and facilities than for others. It is less valid, for example, for camping, cabins, and possibly some trail use. The use of many developed recreation facilities on the Chugach is already at capacity during the primary use season (USDA Forest Service 1999). Even for some dispersed activities, caution should be used in speculating about the prospective balance of capacity and demand.⁸ Although the capacity of the forest for dispersed recreation is considerable, patterns and modes of access to dispersed recreation currently concentrate users at a small number of access “nodes” based on the transportation (road) system (USDA Forest Service 1999). Capacity limits at access points, therefore, are likely to be an increasing concern for recreation management. Individual and commercial adaptation to current or prospective future constraints—such as the use of helicopters—may create additional management problems.

⁷ Based on the 1995 national survey on recreation and the environment (NSRE95) (see Bowker, in press) for a detailed description of data and sources.

⁸ The balance between supply and demand is fundamentally affected by prices; various forms of market intervention, such as permit systems, will affect prices.

Sectoral Analysis of Recreation and Tourism in South-Central Alaska

Colt and others (in press) provides a broad assessment of current patterns of recreation and tourism activity in south-central Alaska. The challenges associated with defining, collecting, and interpreting data on this sector are not unique to south-central Alaska. The academic literature related to tourism, especially its economic components and the benefits of examining it as an economic sector, is growing (see for example, Burns and Holden 1995, Hall and Page 1999, Ioannides and Debbage 1998, Smith 1997). Nevertheless, one of the central themes of this literature continues to be the need for consistent definitions, better data collection, and the evolution of concepts that distinguish recreation and tourism from other consumer services.

Colt and others (in press) relies on several sources that report on some aspect of recreation or tourism activity in south-central Alaska; data collected and reported by the Chugach National Forest are one of these sources. Other sources include reports from the Alaska Visitors Statistics Program, Alaska state agencies, the National Park Service, Alaska cities and boroughs, and data collected as part of special studies. In addition, "key participant" interviews were conducted with operators, observers, and others. These interviews were designed to provide a qualitative description of recent trends and provide a somewhat structured basis for developing near-term projections of future developments.

The data collected and reported by Colt and others (in press) are notable for many reasons. First, the number and variety of sources of information provide some opportunity for being able to derive a reasonable portrait of the industry. On the other hand, the data are just as notable for their gaps and inconsistencies. This is best illustrated by data that might otherwise be a primary source: the Chugach National Forest recreation information management (RIM) database (see fig. 2 in Colt and others, in press). Data from 1989 through 1995 provide evidence of trends in levels and patterns of use that are, for example, consistent with Bowker's (in press) analysis. More recent data (1997-98) suggest changes in both trends and patterns, but it is not possible (in this data set) to link the two periods.

Among the limitations in the RIM data are limited annual sampling, reporting of simple estimates (data from previous years), and significant changes (especially between 1995 and 1997) in collection and computation methods. Generally, RIM data that are associated with facilities, fee collection, or special use permits appear more reliable than data associated with dispersed and noncommercial activities. Aggregate data are likely to be more informative, and Colt and others (in press) are able to supplement the RIM data with data, estimates, and information from other sources.

Recreational Use of the Chugach National Forest

With the data quality caveats in mind, there is ample evidence that the Chugach National Forest is heavily used as a scenic resource by motorists and waterborne passengers and, increasingly, as a place for road-accessible fishing, camping, and motorized recreation. Evidence suggests that businesses, perhaps especially small businesses, play an increasingly important role in providing services related to the recreational use of the forest.

Based on the RIM data, more than half of the time people spend on the Chugach National Forest is spent viewing scenery, wildlife, and fish. Viewing is the most popular activity in all ranger districts and seems to have increased steadily since 1989. Use of the forest for hiking also has grown, although more slowly, and recent data may suggest a downward trend. The trend in forest use for camping is roughly flat, consistent

with reported capacity constraints during peak demand times (USDA Forest Service 1999). Active sports such as mountain biking and white-water rafting seem to be the fastest growing summer activities. These patterns of recreation use and, to some extent, the trends, are consistent with the broad-scale results reported by Bowker (in press).

Colt and others (in press) summarizes the special use permit data collected by the Chugach National Forest in order to enhance the picture of use provided by the RIM data. Permit data indicate that there has been an increase, perhaps substantial, in the role of businesses in supporting and promoting recreational use of the forest. Analysis of business license data (Colt and others, in press) also provides corroborating evidence of the entrepreneurial response to opportunities created by the combination of increasing numbers of visitors to Alaska, increasing wealth, the search for unique experiences, and the resources of the Chugach National Forest. The absence of comparable and reliable data for independent, noncommercial recreation makes it impossible to judge the relative trends in these broadly different patterns of use, with significantly different management implications.

Although the numbers of clients in all permitted activities roughly doubled (1994 to 1998), the numbers of participants in a few categories (camping, kayaking, and hiking) grew far faster than the average. Because permit data are not designed to accurately assess specific activities, the index numbers reported by Colt and others (in press) have to be interpreted cautiously. Nevertheless, there is a basis for concluding that "adventure recreation" activities have increased, perhaps even more than is immediately apparent.

Some evidence suggests that nonresident use of the forest may be increasing faster than resident use. For example, steady growth in the number of nonresident fishing licenses sold contrasts with constant or declining numbers of resident licenses. Similar divergent pattern of use seem to be the case with data on hunting. Although license sales do not measure effort (use), the license data are reliable, and the trends are both strong and notable. These data are also consistent with the view, expressed in some interviews (Colt and others, in press) that increasing numbers of nonresidents are "discovering" the Chugach National Forest.

Colt and others (in press) summarize patterns of use of the Chugach National Forest using four categories of use: viewing wildlife and scenery, recreation based on the use of developed facilities (campgrounds, cabins, trails, etc.), dispersed recreation, and water-based recreation. Comparing patterns and relative trends provides some indication of prospective future management challenges.

As indicated, the use of the forest as a provider of scenery and habitat for viewable wildlife is the dominant use across all ranger districts. Recognizing the limits of the RIM data, this is also a category of use that displays the fastest growth over the past decade. In contrast, trends in facility based use (campgrounds, cabins, trails, etc.) are relatively flat, with a few notable exceptions. The general absence of trends in this category of use is consistent with capacity constraints (especially for cabins and campgrounds). The exception is trail use, especially summer use, where the data do display an upward trend. (Data on winter use are mixed, but qualitative information suggests increases here, too, especially for motorized activity.) There is evidence of increasing friction among competing users of trails, especially as patterns of use change (increasing trail bike activity, for example). Increases in special use (permit-based) hiking are also consistent with both capacity constraints on the readily accessible system and increasing demand for more unique experiences.

Analysis of dispersed use presents greater challenges, as definitive data are not available. Based on hunting and fishing data, broad-scale levels of use are either constant or possibly declining. As mentioned, however, there is some evidence of changes in patterns toward nonresident and commercially supported activity. The data on aircraft-based access for dispersed recreation are also weak. Nevertheless, there is evidence of increasing use of motorized access and, in some cases (helicopters, for example), increased challenges to management as well.

Water-based recreation in and around the Chugach National Forest seems to be increasing. This includes both rapid growth (for example, white-water rafting on the Seward Ranger District) and slower, but steady growth (water-based access for overnight use in Prince William Sound). As is the case for land-based dispersed activities, there seems to be increasing use of both motors and commercial services for recreation purposes. Although the data are not definitive, the primary consequence of water taxis seems to be a shortening of the time required for the recreation experience, rather than a greater dispersal of activity.

Broad-Scale Trends

Data from various sources provide a picture of the larger context in which the Chugach National Forest exists. Evidence suggests that growth in total numbers of participants in tourism in Alaska has slowed from the rate of growth observed in the early to mid-1990s. For example, in 1999, summer visitors to Alaska increased by 3.0 percent from 1998; visitor arrivals by air (accounting for half the total) increased by 2.0 percent (McDowell 2000). By using the same method as Colt and others (in press), estimated visitor arrivals in south-central Alaska increased by about 1 percent. These rates of growth are sharply lower than the double-digit annual increases reported in the early 1990s. Reported increases in 1999 were lower than the previous year for the third consecutive year.

In apparent contrast, in 1999 the number of visitors to Alaska's national parks increased by 7 percent, to a record level. The number of visitors at the two parks adjacent to the Chugach National Forest (Wrangell-St. Elias and Kenai Fjords), however, was still below the level reported in 1997. Other indicators of tourism activity in south-central Alaska, such as bed tax receipts and harbor taxes, suggest a leveling off—or even declines in tourism—as of the late 1990s. Some of the moderation in growth may be cyclical (although there is no corresponding decline in broad-scale economic indicators that could explain this change). Among the plausible explanations for slower growth are a “maturing” sector, increasing competition from other tourist destinations, capacity limits (given current infrastructure), and the possible effects of explicit efforts (by some communities) to limit growth in recognition of social and environmental consequences (Egan 2000).

Forest use data (especially the permit data), broader indicators (such as the business license data), and the interviews, show that although total growth in tourism may be slowing, some categories of activity are increasing rapidly. Perhaps the most significant among these is what Colt and others (in press) describe as “soft adventure” (a combination of comfort and outdoor recreation-based excitement). Demographic and economic changes are factors on the demand side, and entrepreneurial opportunities and innovations are factors on the supply side. Consequently, activities such as white-water rafting, guided kayaking, guided hiking, snowmachine tours, and helicopter skiing have increased rapidly; all are taking place on the Chugach National Forest. Although growth rates can be a misleading indicator for scale, the variety of activities and the rates of change are notable. Demand for some activities, however, may be highly sensitive to

changing tastes and preferences as well as macroeconomic factors. Rapid innovation is the entrepreneurial response, and rapid changes in patterns and types of use are the management challenges.

Winter recreation appears to be increasing throughout south-central Alaska, altering, to some extent, the strong seasonal character of recreation and tourism in Alaska. Although, there is little systematic data to support this observation, several factors contribute to this development. For outdoor recreation, improvements in both equipment and clothing have enabled a wider range of users to participate. Although residents account for most of the increase in winter activities, Egan (2000) reports that Alaska has now become a popular winter sightseeing destination for Japanese tourists.

The interviews and the business license data reported by Colt and others (in press) clearly illustrate the entrepreneurial response to recreation and tourism opportunities in south-central Alaska, especially those associated with the Chugach National Forest. For example, between 1993 and 1998, the number of business licenses for enterprises associated with tourism, and located near the Chugach National Forest, increased by nearly 6 percent per year, compared to no net increase for all of south-central Alaska, and only 2.5 percent growth for all of Alaska. Several factors account for the increasing role of businesses in recreation and tourism. The most notable are increasing wealth of the population, decreasing leisure time, and the need for specialized equipment or skills. The latter are especially important for various “adventure” activities. Demographic change—the aging of the baby boom generation—will lead to changes in preferred activities, evolving business opportunities, and changes in the mix of services expected from publicly managed resources.

Relatively large numbers of visitors to Alaska currently pass through or nearby the Chugach National Forest; Colt and others (in press) call this “bypass” and note that it represents business opportunities for entrepreneurs (potential customers) and potential challenges for managers. Small changes in the share of these transient visitors that engage in direct-use recreation activities—that could easily result from the efforts of a few entrepreneurs—could lead to significant changes in patterns and levels of use of the Chugach National Forest. Therefore, even if trends in the growth of total visitors to Alaska continue to slow, rates of recreation use on the Chugach National Forest could increase considerably faster.

Outlook for the Future

Interviews conducted by Colt and others (in press) provide one basis for judging future developments in recreation and tourism in south-central Alaska. As they indicate, their approach was both opportunistic and designed to gather qualitative rather than quantitative information. The number of participants, however, was relatively large (more than 120) and included a wide range of private sector enterprises. The range encompasses both scale and type of operation. The interviews also included residents of communities surrounding the Chugach National Forest, members of nongovernment organizations, and public sector officials and managers.⁹

Although the interviews were “semistructured,” the information they produced is not easily condensed and is not suited to characterization in terms comparable to formal surveys. Nevertheless, a set of highlights does emerge and provides views of the future that can be closely linked to the sources of quantitative information describing recent trends.

⁹ Detailed information on participants in interviews is provided in appendix 3 of Colt and others (in press).

Following are some of the highlights that can be drawn from the interviews:

- There likely will be slower overall growth for the industry in the future as compared to the past decade; some activities will present opportunities for faster than average growth.
- There likely will be a continuing shift in the composition of activities, although viewing the region and the scenery and wildlife of the forest are expected to remain primary attractions; the demand for recreation-related services, including “adventures” is expected to continue to grow.
- As at present, the future will provide various business opportunities, and there likely will continue to be variety in scale and type of operations; although competition will likely increase, interdependence and cooperation also may increase.
- Information technology in advertising and marketing for businesses, and technology in equipment (especially transportation-related technology) will play an increasingly important role for both businesses and individuals.
- The transportation system and policies about access will be key considerations that will shape the future, in terms of both scale and type of activities.
- There is potential for, perhaps even the likelihood of, increasing conflict among recreation users seeking widely divergent experiences; the likelihood will be reduced—but not eliminated—by increasing the capacity of the recreation infrastructure.

Debbage and Ioannides (1998) describe changes in the “production process” for tourism. Among the developments they highlight are some uniformity in the bundle of services packaged for tourists (tourism is becoming a commodity, with accompanying cost and price-based competition); and a counter-trend toward niche marketing for places and firms. Economies of large scale and various developments in transportation enable the former; developments in information technology enable the latter. Colt and others (in press) identify both this “commodification” and the niche marketing—as well as interactions between them—as important trends in south-central Alaska.

The Chugach National Forest likely will face an increasingly complex recreation and tourism sector in which there are both large firms and many small firms who will depend on the forest for some of the services that they are packaging and selling to visitors. It is not possible to anticipate all of the kinds of use that are likely to be in demand or, with any precision, where they will take place. It does appear likely, however, that commercial, technological, social, and economic developments will constantly conflict with the boundaries of traditional uses and simple management prescriptions.

Summary and Key Messages

Studying tourism can be both enigmatic and bizarre: enigmatic inasmuch as there remain aspects of it difficult to define, and bizarre in that it sets out to make theoretical sense of people having fun

Burns and Holden (1995)

Much of the concern about contemporary land management planning can be characterized as the need to better understand the extent to which it is possible to simultaneously achieve economic, social, and natural resource policy objectives. In the past decade, increasing attention has been given to the need to emphasize protection and restoration of ecosystem services in place of commodities; there is also greater emphasis being given to other natural resource-based services, such as recreation. In many places, perhaps especially in Alaska, increasing recreation and tourism development is almost inevitable given prospective economic changes (both structural change and

income growth) and demographic changes. This leads to two fundamental questions. First, is the growth of recreation and tourism likely to contribute to sustainable community development? Second, what are the tradeoffs between recreation use and the biophysical conditions of an ecosystem?

Recreation and tourism is a significant economic sector and component of the quality of life for both residents and nonresidents of Alaska. Therefore, resource allocation decisions affecting the “physical plant” (Smith 1998) of recreation and tourism will be important. The physical plant must be seen to include the infrastructure (campgrounds, cabins, roads, trails, etc.) and the landscape in which it exists. Increasingly, management and policy choices will reflect tradeoffs between accommodating (or even promoting) recreation and tourism and other objectives of forest management, as well as tradeoffs among types of recreation and tourism activity. Understanding the reality and the dimensions of these possible tradeoffs is for future research.

Because the quantity and the variety of recreation and tourism demands on the Chugach National Forest are already high, and are likely to increase, tradeoffs are inevitable, and the tradeoff decisions are likely to be disputed. Many of these disputes will not be amenable to resolution by zoning, as they will be based on core values, specific places, and widely divergent preferences and views of the best future for public resources. Simple, even long-standing management principles—such as “the greatest good for the greatest number”—may prove inadequate in the face of strongly held views over the disposition of unique public assets. This is no less likely when addressing recreation and tourism than has been the case for preservation, commodities, and other allocation choices. Nevertheless, clear objectives, formulated with reference to context and role (niche) are necessary, if not sufficient conditions for effective policy and planning decisions. Complexity, rapid change, and contentious issues are among the features of the management and policy landscape associated with recreation and tourism.

Trends with Particular Importance to Chugach National Forest Planning and Management

There seem to be divergent trends between recreation (resident) and tourism (visitor) activities. One source of this divergence is differential rates of economic growth, especially in per capita income: growth in Alaska’s per capita income has lagged behind that of the United States as a whole, and as of the late 1990s, Alaska’s per capita income had gone from being well above average to a level equal to the national average.

Economic and demographic factors will contribute to increases in the relative importance of tourism (visitor activity) within the recreation and tourism mix. Nevertheless, because participation in outdoor recreation is a regular part of life in Alaska, and because rates of participation are much higher there than the national average, this may be a subtle change. In addition, for some activities (such as viewing wildlife and scenery), patterns of participation and consumption are more alike than different. One implication, however, is that as levels of use increase, all participants will experience crowding and some degrading of the recreation experience; for residents, this will seem to be (or will be) a conflict with tourism. Forest management may not be able to maximize use and meet both resident and nonresident expectations.

Viewing wildlife and scenery is likely to remain the single most important category of recreation demand, and a significant element of tourism activity in south-central Alaska. As manager of important pieces of the scenery, the Chugach National Forest has a central role in whether and how this demand is met. “Soft adventure” activities seem likely to be the fastest growing component of demand in the near future, and these

activities are typically more land-intensive (than viewing scenery) and are often dependent on access and permissions currently granted through permits. Here, too, forest management decisions will affect both the quantity and quality of these activities.

Economic Factors

The economic conditions in Alaska vs. those in the lower 48 states may reinforce different trends in recreation (resident) and tourism (nonresident) activities; relatively higher rates of economic growth and growth in per capita income in the lower 48 states, as compared to Alaska, will lead to higher rates of growth in tourism as compared to resident recreation.

A state-wide economy that remains highly dependent on a few, relatively volatile sectors, and an increasingly competitive world economy may contribute to continued, slow economic and income growth for Alaska in the near term.

A combination of factors, including sustained economic growth in the lower 48 states, accompanied by low inflation, greater regional and international economic integration, and technological change present Alaska businesses with particular competitive challenges.

Many economic sectors in Alaska remain at risk from business cycles and continuing structural change in other economies; recreation and tourism seem to be especially susceptible to volatility from the business cycle.

Together, recreation and tourism make a significant contribution to the economies of Alaska. Although not traditionally viewed in this fashion, tourism is an important export sector for the regional and local economies. By exporting recreation and related services in return for nonresident expenditures, tourism-based firms expand the local economic base.

In addition to the likelihood of a continuing divergence between trends in resident and nonresident use, other implications of these observations for recreation and tourism include the need to adapt and compete on the basis of price—as well as unique scenery and experiences—and the challenge of attracting both public and private sector investment. Public infrastructure investments will continue to be critical to Alaska firms, and methods and levels of fees charged for the use of public resources will be increasingly important and possibly contentious.

Trends in Recreation and Tourism Use

Although other public owners and (perhaps especially) the private sector will play important roles in determining the future, it is clear that the choices made in the Chugach National Forest plan will affect future patterns and trends in recreation and tourism in south-central Alaska. At the same time, because of the importance of the decisions of other land owners and managers (other public agencies, and the private sector, including Alaska Native Corporations), and other factors, such as market developments, the Chugach National Forest cannot, by itself, ensure any specific future.

Although recreation is an important component of the quality of life in Alaska, commercial recreation development is also well established in south-central Alaska. The Chugach National Forest can facilitate and guide this (especially through the permitting process), but the Chugach National Forest cannot set its own objectives with the presumption that it has the tools or the ability to control all activities.

In general, recreation and tourism use and demand seem to have slowed across many activities in the late 1990s—as compared to rapid growth in the early part of the decade. Various measures of recreation and tourism use support this conclusion, but the data are insufficient to draw long-term implications. Among the possible explanations

for the slowing rates of increase in tourism are local (Alaskan) and national economic and demographic trends, cycles, and competition in the tourism industry and capacity constraints in some activities or key infrastructure (capacity constraints include both physical limitations—at campgrounds and cabins, for example—and “psychic” limitations based on perceptions of the quality of acceptability of experiences).

Many Chugach National Forest facilities are operating at or near physical capacity during primary use seasons. In addition, there may be some slowing of use because of the absence of key infrastructure or facilities; the quality of experience also may be a limiting factor for some uses. Concepts of carrying capacity for recreation activities are not well understood; therefore, managing for maximum numbers of users likely will require greater attention to quality issues.

Although the demographic and economic characteristics of the population of Anchorage are largely similar to those of the lower 48, patterns of recreation use (activities and frequency) differ across residents and nonresidents. Despite these differences, viewing wildlife and scenery is the primary use across most of the forest, for both residents and nonresidents. Consequently, locations of highest use are those classified as “roaded natural”; that is, road access with opportunities to view scenery and animals.

The increase in many activities in some areas is increasing interactions among participants, which is causing conflict among resident and nonresident participants. Similarly, increasing participation in activities may be increasing interactions with wildlife, resulting in possible harm to both habitat and current populations. Some of these interactions are the consequence of population growth and development, some of these interactions are the consequence of increasing levels of recreation, and increasing dispersion of activities.

Looking to the Future

Continuing growth in recreation and tourism is likely, although future growth rates may be slower than was the case in the early 1990s. Much of Alaska’s economic activity is highly subject to business cycles, and this sector is no exception—and may be slightly more susceptible to broad-scale economic trends than commodity sectors. Secular trends and long periods of economic expansion in the 1980s and 1990s should not obscure the inherent volatility in the economic activity associated with recreation and tourism. Nevertheless, recreation and tourism may be one “industry” where Alaska can achieve both comparative advantage and some economies of scale.

Based on recreation demand models (Bowker, in press) as well as key respondent interviews (Colt and others, in press) the fastest growth in demand likely will be viewing wildlife and scenery, and in activities that are generally—but vaguely—termed “soft adventure.” In the future, recreation and tourism activities are, on average, likely to be shorter in duration and more intense, in keeping with broader social and economic trends. This likely will lead to increased opportunities for commercially mediated activities. At the same time, continuing evolution and competition in the commercial recreation and tourism sector will, itself, contribute to innovation and efforts to explore—and create—market opportunities. The result likely will be continued increases in demand for management decisions that support commercial activities. Competition within the commercial sector, and competition between commercial users and the general public will continue and will increase.

The level and location of many (perhaps most) activities will depend on both the development of infrastructure (through private and public efforts), and management choices of the Chugach National Forest. A potentially large source of future use may come from changes in the transportation infrastructure (the opening of the Whittier Road; and the

possibility of new infrastructure in Prince William Sound) and possible changes in methods and patterns of nonresident use (e.g., changes in docking or passenger disembarkation for cruise ships). Existing and emerging technologies, however, also will lead to increasing dispersed recreational use. For example, the combination of technologies such as global positioning system and transportation (snowmobiles and helicopters) provide the prospect for considerable change. Several factors will likely increase demand for short-duration, commercially mediated uses, including both guided and capital intensive activities (e.g., heli-skiing and heli-hiking), as well as activities that require specialized equipment. Although many factors will determine the future of recreation and tourism in south-central Alaska, through its contribution to management of the region's scenery, access, and infrastructure, the Chugach National Forest will help shape the future.

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