

Case Study: Environmental Impacts of Tourism in Juneau, Alaska

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As the population of Juneau, Alaska continues to grow, and as its popularity as a tourist destination continues to increase, the city must balance the economic benefits brought by tourism with the environmental consequences of increased tourist-related activity on the region's landscape and wildlife. Various public and private initiatives have been undertaken by the city's environmentally-aware and politically-active population, including several actions aimed at mitigating the environmental impacts while promoting the economic benefits of tourist-related activities; a comprehensive community survey on the environmental and economic effects of tourism; *20/20 Vision for Downtown Juneau*, a comprehensive planning effort of the Juneau planning department; and a year-long study undertaken by two universities that explores alternative development scenarios [see sidebar]. These efforts acknowledge the importance of tourism in the economic and environmental well-being of the region.

Juneau's Environment and History

The City and Borough of Juneau (CBJ), the capital of Alaska, lies in the state's southeastern panhandle, known simply as Southeast, and is bordered by British Columbia to the East, the Yukon Territories to the north, and numerous islands and fjords to the south and west. The city was founded in 1880 after gold was discovered in the streams that fall from the mountains into the Gastineau Channel. It was the first city in Alaska

founded after the United States purchased the territory from Russia in 1867, and the first city in Alaska founded due to the discovery of gold. Juneau is unique in its isolation: glaciers and steep topography prevent overland passage to the rest of Alaska, and the city can only be reached by plane or boat.

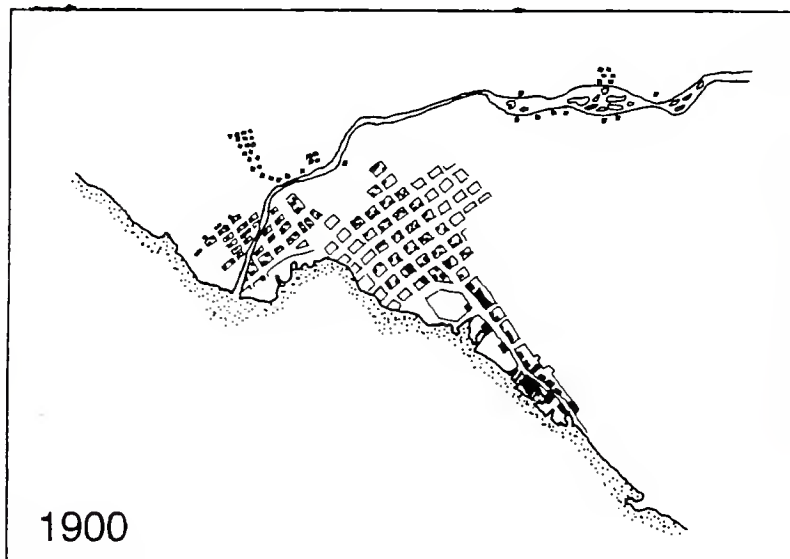
This isolation is also one of Juneau's main attractions for both residents and tourists. The city is an island of human activity in a vast wilderness, a reversal of the pattern seen in the lower states. The region is surrounded by the largest national forest in the United States, the Tongass, which acts as an important recreation and economic resource.

Like many cities in the Pacific Northwest, Juneau has experienced rapid population growth. In 1946, 57 years after its founding, Juneau's population was only 6,000 (DCRA, 1997). Fifty years later, the population has increased to nearly 30,000 and it continues to rise (Alaska Department of Labor, 1997). While Juneau remains the capital of Alaska, persistent efforts to move the capital to Anchorage cast a constant shadow of doubt over Juneau's economic future. With the loss of its capital status, Juneau would lose the largest component of its economy, and with commercial fishing, timber, and mining in decline, tourism would likely become the dominant industry. Current planning and community efforts are aimed at balancing economic development through promoting tourism and successfully managing the environment that makes Juneau an attractive tourist destination.

The Nature of Tourism in Juneau

Juneau's position as a tourist center stems from its role as a major port for Alaskan cruise ships departing from Seattle and Vancouver and heading to Glacier Bay through the exceptional landscape of the Inside Passage. Tourists flock to the area to see the

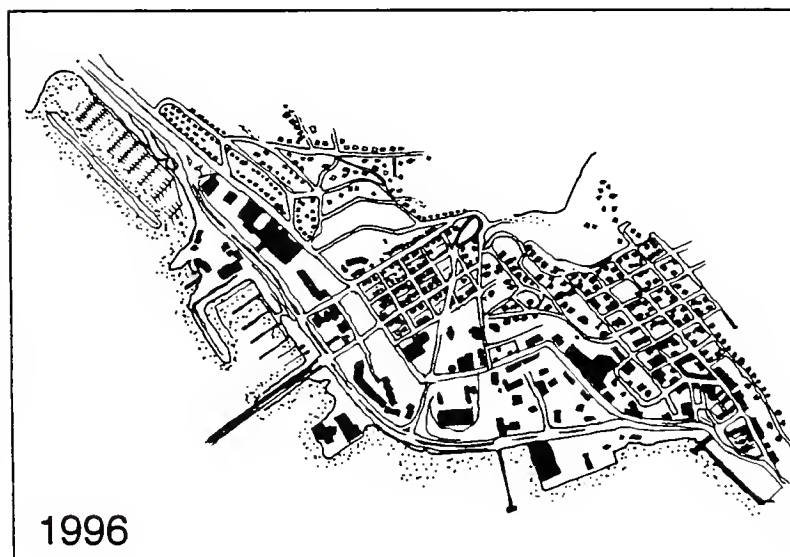
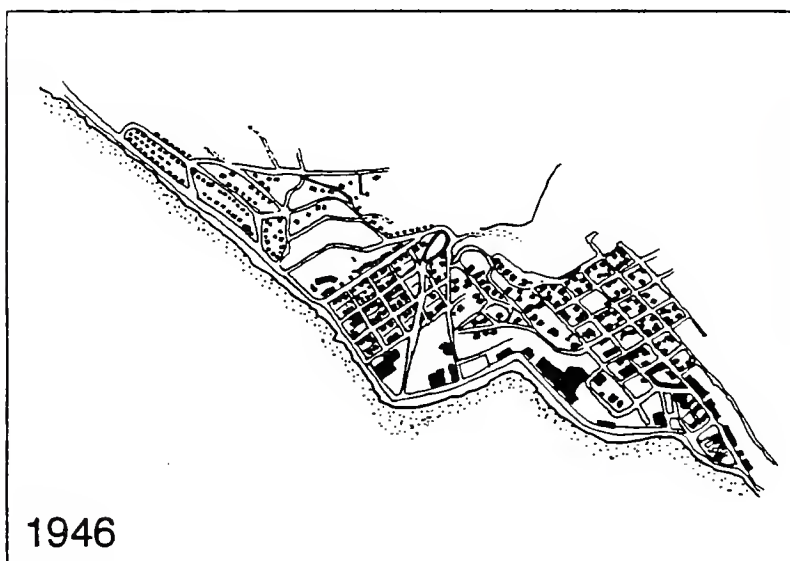
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Juneau's Land Use Evolution

After its founding in 1880, Juneau grew rapidly as a mining town. Mines and tents were the first structures built, followed by typical western buildings laid out in a grid pattern on the coast of the Gastineau Channel. Juneau became the capital of the Territory of Alaska in 1900, and the population continued to grow during the Second World War and the Cold War, when Alaska became the 49th state in 1959. The importance of mining declined in the 1960s and 1970s, but the population continued to grow because of the state's petroleum boom of the 1970s and 1980s, the city's continuing role as state capital, and the importance of the booming tourist industry.

(Graphics courtesy of Juliellen Sarver and Wen-Yie Chen)



wildlife that inhabits this largely pristine environment of forests, glaciers, fjords, and islands, as well as to experience native Alaskan culture and art and historic goldrush-era towns. During the tourist season, which extends from May through September, as many as six cruise ships, each carrying between 800 and 1800 passengers, dock at Juneau's waterfront every evening. When the passengers disembark, Juneau's population temporarily increases by as much as 20 percent (Juneau Convention and Visitors Bureau, 1997).

The tourist industry's approaching dominance brings not only dollars to Juneau, but also changes to the natural environment and to the downtown. Downtown trails have become more accessible to tourists, but inadequate maintenance contributes to increased trail erosion.

Because Juneau cannot be reached from the land, the CBJ must dispose of all of its solid waste within its boundaries. The CBJ must also accept the solid waste from the cruise ships, adding to the city's waste disposal problem.

Historic residential areas are within walking distance to downtown, and permanent residents bemoan the loss of the downtown to tourist shops that are open for only several months of the year. Although downtown has the potential to be a successful pedestrian-oriented area for residents, most non-tourist-related retail outlets are located several miles from downtown. Given the tourist industry's importance, Juneau's response to its economic and environmental impacts will determine the city's future conditions.

Community Responses

The following section outlines several of the key efforts aimed at addressing the impacts of the growing tourist industry.

Head Tax

A head tax of \$7.00 per cruise ship passenger was proposed in 1996 to help the City cover the costs associated with accommodating the ships (Attitude 58, 1997). The cruise ship industry lobbied against the tax, and threatened to remove Juneau as a port of call. After much debate, that threat combined with ambiguous proposals for the use of the head tax funds contributed to the close defeat of the measure. The measure is expected to come up for reconsideration at a later date.

Land Swap

A recent land swap between private owners and the United States Forest Service was an innovative endeavor to preserve sensitive habitat while accommodating tourist needs. In this swap, privately owned bear and deer habitats were traded for land suitable for development adjacent to the Eagle Creek Ski facility, the city's ski resort. The wildlife habitat remains intact, while the private owners are able to realize economic benefit from their new property. While not practical in all cases, this type of solution could contribute to the preservation of sensitive wildlife habitats while promoting economic development and tourist and recreational land uses (Phillips 1997).

Restricting Helicopter Tours

Helicopter tours of the nearby glaciers and wildlife areas are an important tourist attraction in Juneau, generating high incomes for the tour operators and substantial revenues for related businesses. Helicopters, however, can have negative impacts on recreational use of natural areas as well as on wildlife. Responding to public opposition to the helicopter intrusions, the city of Juneau and the U.S. Forest Service have restricted landings in the wilderness areas of the Tongass National Forest and have mandated alternate flight paths to reduce noise impacts on populated and sensitive areas. While tour operators argue that these requirements increase costs and reduce the attractiveness of the tours, the full effects on the helicopter operators and on the wilderness areas will become apparent during the upcoming tourist season (Phillips 1997).

Additional Related Internet Sources

<http://www.state.ak.us/local/akpages/LABOR/research/region/juno.htg/junprofl.html>

This web site provides a profile of general economic trends in Juneau and Alaska

<http://www.juneau.com>

This web site provides information on tourism, sports, community events, organization, and is a good source for other general information on Juneau and Southeast Alaska.

<http://www.alaska.net/~awrta/index.html>

This is the web site for the Alaska Wilderness Recreation and Tourism Association. It presents information on the sustainable tourism industry in Alaska.

<http://www.juneau.com/audubon/>

This is the web site for the Juneau Audubon Society and contains information on wildlife resources and wetland habitats in Alaska.

<http://www.ptialaska.net/~sitcons/>

This is the web site for the Sitka Conservation Society and includes information on current efforts to protect the Tongass Forest and surrounding waters in Southeast Alaska.

A Juneau Century: 1946-2046

In 1996, the Department of Landscape Architecture at the School of Design of North Carolina State University (NCSU) joined forces with the City and Borough of Juneau (CBJ) and the Department of Public Administration of Alaska-Southeast in Juneau to study the city's growth and land use issues. Using MapFactory, a Macintosh-based GIS system, students attempted to determine where development is most likely to occur over the next fifty years based on topography, land ownership, current zoning, natural features, wildlife habitats, and land use patterns established over the past fifty years. The goal of the year-long study was to illustrate the potential long-term effects of current land use decisions.

Sixteen students in the NCSU Landscape Architecture Department traveled to Juneau in September 1996 for a site visit and to meet with public administration students and faculty at the University of Alaska (UAS), city officials, residents, business owners, and community activists. Further communication between Juneau and NCSU included several teleconferences, email exchange, and the development of a web page. Four students and the head of the Landscape Architecture Department returned to Juneau in June 1997 to present the findings of their study to the residents of the city. The web page can be accessed at http://www.design.ncsu.edu/departments/landscape/a_juneau_century/index.html.

The project was awarded Special Commendation in the American Society of Landscape Architects National Student Design Competition for innovative use of computers and the world wide web to facilitate community participation.

Community Survey on the Effects of Tourism

In 1997, a survey was conducted on behalf of a group of business leaders, citizens, environmental advocates, and city officials, known as the Tourism Working Group. The survey investigated citizen opinion on tourism and gauged community preferences for several policies intended to improve the city's relationship with the tourism industry and to assist in the city's planning efforts. The survey results illustrate the ambivalence of Juneau's residents toward the tourism industry in light of the industry's positive economic impact. The survey covered issues including transportation; access to downtown and recreation areas; economic benefits of tourism and potential limitations on the industry. Overall, respondents supported the tourism industry, judging that the benefits associated with the industry outweigh its costs (Attitude 58, 1997).

Native Interests and Activities: Goldbelt, Inc.

Alaska's Native Claims Settlement Act enabled the formation of Native Corporations, private corporations with considerable power and influence over the state's land uses. In the Southeast, one of the dominant Native Corporations is Juneau-based Goldbelt, Inc. Since the 1970s, Goldbelt's activities have been concentrated in the timber industry, but as

the effects of clear cutting take their economic and environmental toll, the organization has refocused its efforts towards real estate and tourism development. In Juneau, Goldbelt's recent initiatives include the Mount Roberts Tram, which shuttles tourists and residents up the face of one of the two mountains that dominate downtown, and in doing so, makes several CBJ-owned trails accessible to a wider audience and significantly increases the use of these trails. Goldbelt also dominates the ferry tour market, operating several popular ferries that depart from Juneau. Because of its choice land holdings, Goldbelt is also an important player in the residential and resort development arena in the CBJ.

20/20 Vision for Downtown Juneau

20/20 Vision, CBJ's plan for the downtown, reflects community concerns surrounding the "tourist-ghetto" that the waterfront and downtown have become. In addition to addressing city-wide issues of diversifying the economy, providing affordable housing, and improving the public transportation system, *20/20 Vision* focuses on improving the downtown area and making it accessible and useful to both tourists and residents. Aspects related to tourism and the environment include waterfront development reflecting a diverse economy that includes, but is not limited to,

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tourist concerns; the establishment of a "year-round visitor industry"; and the rather nebulous goal of achieving a "sustainable balance with economic development in a natural environment" (City and Borough of Juneau, 1996).

The plan has become an important communication tool between the city and residents, and the draft version was posted on the Internet to inform residents and to solicit contributions and ideas from the public. Whether specific development and planning efforts will reflect the vision outlined in the plan remains to be seen.

Conclusion

Juneau's high environmental quality, strong tourist economy, and politically and physically active population provides a unique opportunity to study the issues and conflicts arising between tourism and the environment. Unlike many other cities, the natural environment in Juneau is constantly in the forefront of decision-making and political activity. The people and politicians in Juneau acknowledge the economic value of the environment, and understand that the environment that sustains such economic benefit must be protected if it is to continue providing these benefits.

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