

The Pennsylvania State University

The Graduate School

**UNDERSTANDING STAKEHOLDER PERSPECTIVES OF AVIATION
TOURISM GROWTH IN THE ALASKA RANGE: AN EXPLORATION OF
HISTORY, CHANGE, AND SUSTAINABLE TOURISM IN NATIONAL PARKS
AND GATEWAY COMMUNITIES**

A Thesis in

Recreation, Park, and Tourism Management and
Human Dimensions of Natural Resources and the Environment

by

Erinn Drage

© 2021 Erinn Drage

Submitted in Partial Fulfillment
of the Requirements
for the Degree of

Master of Science

May 2021

The thesis of Erinn Drage was reviewed and approved by the following:

B. Derrick Taff
Assistant Professor of Recreation, Park, and Tourism Management
Thesis Co-Adviser

Peter B Newman
Professor of Recreation, Park, and Tourism Management
Head of the Department of Recreation, Park, and Tourism Management
Thesis Co-Adviser

Marijke Hecht
Assistant Professor of Recreation, Park, and Tourism Management

ABSTRACT

Nature-based tourism destinations, including gateway communities to national parks, are currently undergoing rapid and dramatic changes. As tourism continues to rise in popularity and global climate change transforms the natural environments that attract tourists, understanding the historical contexts of tourism in protected area settings and documenting ongoing complex processes of change, especially from the perspective of local stakeholders, is imperative for sustainably managing tourism into the future. This thesis advances the incorporation of historical understandings of tourism destinations and change over time into tourism research and adds to a growing body of literature on stakeholder perspectives of impacts in protected area settings. Using aviation tourism in Talkeetna, AK and Denali National Park and Preserve as a case study, this thesis seeks to answer four research questions: R1) How do local stakeholders describe the history of aviation tourism in Denali National Park and Preserve?; R2) What do stakeholders identify as indicators of change associated with the aviation tourism industry in Denali? How do they perceive these changes over time?; R3) How do stakeholders describe the impacts of aviation tourism in the Denali Region? and; R4) What do stakeholders perceive to be the most important park management challenges to sustainably managing aviation tourism growth in Denali National Park and Preserve? Results of this thesis help to document local understandings of the history and development of flightseeing and glacier landing tourism in the region, reveal important indicators of change in the industry over time, and explore the social, environmental, and economic impacts of growth in the aviation tourism industry.

TABLE OF CONTENTS

LIST OF TABLES	V
LIST OF FIGURES	VI
ACKNOWLEDGEMENTS	VII
CHAPTER 1 INTRODUCTION.....	1
CASE STUDY SETTING.....	5
THESIS OBJECTIVES AND RESEARCH QUESTIONS.....	9
THESIS ORGANIZATION.....	10
CHAPTER 2 TRACING THE DEVELOPMENT OF FLIGHTSEEING AND AIR TAXI TOURISM IN DENALI NATIONAL PARK AND PRESERVE: INTEGRATING STAKEHOLDER PERSPECTIVES OF HISTORY AND CHANGE	12
1. INTRODUCTION	13
2. LITERATURE REVIEW	15
3. RESEARCH DESIGN AND METHODS	19
4. RESULTS	26
5. CONCLUSION.....	40
6. IMPLICATIONS	41
CHAPTER 3 EXPLORING STAKEHOLDER PERSPECTIVES IN PROTECTED AREAS AND GATEWAY COMMUNITIES: A CASE STUDY OF AVIATION TOURISM IN THE DENALI REGION.....	43
INTRODUCTION	44
LITERATURE REVIEW	46
SETTING	50
METHODS	51
RESULTS	53
DISCUSSION & CONCLUSION.....	66
CHAPTER 4 CONCLUSION.....	71
SUMMARY OF FINDINGS	72
THEORETICAL INSIGHTS AND CONTRIBUTIONS	74
MANAGEMENT IMPLICATIONS.....	76
LIMITATIONS.....	78
FUTURE RESEARCH DIRECTIONS.....	80
REFERENCES	82
APPENDIX.....	96

List of Tables

Table 2-1: Interview lengths and stakeholder attributes	24
Table 2-2: Timeline of historically significant events in the history of aviation tourism development in Talkeetna, AK.....	27
Table 3-1: Stakeholder attributes of qualitative interviewees.....	52
Table 3-2: Emerging themes and subthemes of the impacts of aviation tourism growth in Talkeetna and DENA	64

List of Figures

Figure 1-1: Map of Denali National Park and Preserve	6
Figure 1-2: Backcountry glaciers and landing portals in Denali National park and Preserve.....	8
Figure 2-1: Number of Denali climbing permits and number of flightseeing tours from 1996-2018	33
Figure 3-1: A general model for sustainable tourism	47

Acknowledgements

First, I would like to acknowledge that this thesis was largely written on the unceded territory of the Susquehannock people in Central Pennsylvania, where Penn State University sits today. The study site for this thesis is located within Dena'ina Ełnena and Koyukon homelands, on the traditional territory of the Dena'ina and Koyukon people. While this thesis focuses on the contemporary history and colonial context of the community of Talkeetna, the lands on which this research is based has historically been and continues to be home to Native Alaskan people. While Mount McKinley is referenced in a historic context in this thesis, the mountain is, and has always been, Denali or Dghelay Ka'a.

Writing a thesis is no easy task – but having the right support systems certainly makes it easier. My committee, first and foremost, offered more support than I ever could have imagined when starting this degree. Thank you to Derrick and Peter, who took a big chance on me and have always allowed me to be unapologetically passionate about so many interests outside of school. Parts of this thesis were conceived and written in the Arctic and Antarctica and in so many places in between. The unending support and encouragement you gave me, both for this thesis and in all of my other pursuits, will never be forgotten. Marijke, meanwhile, grounded me from afar when I needed it most. Thank you for consistently helping me find my own voice while pushing me to become a better researcher. A big thank you is also in order for my qualitative-research support group, a powerful collection of women who helped me through the highs and lows and let me learn, question, and grow in such a safe space. To my family, of course, who have supported me through any challenge or interest I have ever chosen to pursue. And finally, to Justin, my partner in crime, my adventure buddy, my COVID bubble, my crutch, my best friend – thank you for all of the patience, encouragement, and ice cream that made this thesis possible, even during a global pandemic.

CHAPTER 1

INTRODUCTION

We do not believe that the residents of this community realize what an asset, from the standpoint of the tourist trade, the majestic Mt. McKinley, visible from Anchorage, is to this point.

- Cordova Daily Times, 1917

Worldwide, tourism occupies a large and rapidly growing segment of the global economy, representing an estimated 330 million jobs and 10.3% of global GDP in 2019 (World Travel and Tourism Council, 2020). As national and international travel is increasingly enabled through transportation and technological innovations, multilateral agreements and progressive economic and geopolitical agendas, and the rapid growth of a middle-class that can afford to travel, tourism has seen widespread development into a highly complex and diverse industry (Fennell, 2002; Gibson, 2006). In the face of this complexity, the need to consider the interactions of economic, social, and environmental systems both affecting and being affected by tourism is critical, especially in local contexts. Indeed, among the endless list of issues influenced by the exponential increase in tourism are the economic reliance of host communities on tourism (Ioannides, 2003), the potential for tourism to degrade environmental quality (Buckley, 2001), and tourism impacts on local livelihoods, lifestyles, and quality of life (Andereck & Nyaupane, 2011; Besculides et al., 2002). As the potential socioeconomic and environmental effects of tourism growth continue to surface, it is important to understand tourism development and change at various geographic and temporal scales to inform appropriate management and planning in complex tourism systems.

Nature-based tourism, one of the fastest growing subsets of tourism in the world (Balmford et al., 2009), is of special concern when it comes to understanding tourism development given its reliance on high environmental quality (Eagles, 2002), commodification of natural resources for

economic gain (Duffy, 2015), and potential influence on conservation agendas (Figgis et al., 2007). Moreover, nature-based tourism is typically located in rural regions and often associated with protected areas, meaning that the nature-based tourism industry often overlaps with rural community development and natural resource management in ways that other subsets of the tourism industry may not (Buckley et al., 2003). While nature-based tourism has been lauded as a potentially beneficial development strategy for rural communities across the globe and as a tool for the protection of natural resources, the complex nature of the industry calls for a more nuanced understanding of tourism development on a case-by-case basis to evaluate its potential advantages and disadvantages (Balmford et al., 2009; Eagles & McCool, 2002).

In the United States, one of the largest drivers of nature-based tourism is the vast network of parks and protected areas in the country, including the ‘crown jewels’ within the national parks system. Parks and protected areas drive a lucrative tourism and outdoor recreation industry in the U.S., with national parks supporting an estimated \$41.7 billion in economic output in 2019 alone (Cullinane Thomas & Koontz, 2020). Visitation to national parks has also been identified as an important driver of spending in rural communities, with national parks increasingly recognized within political spheres as tools for stimulating rural economies and creating jobs (Task Force on Travel and Competitiveness, 2012). At the same time, gateway communities provide essential services for tourists visiting national parks in the form of food and lodging, recreational outfitters, and commercial services tendered through permits, leases, or contracts awarded to private operators providing facility maintenance, guiding, transportation, or educational programming in parks (Absher et al., 2003). These commercial tourism operations, while often a critical component of visitor services in national parks, can be controversial and contribute to complicated management issues for both parks and local communities, including crowding,

conflict, and pollution (Quinn, 2002). While it is well understood that tourism in national parks drives important economic benefits for the gateway communities in these natural amenity-rich regions, the potential impacts of tourism growth and change at the local level is rarely sufficiently understood (Howe et al., 1997).

Despite the recognition of the complex and important relationship between national parks, nature-based tourism, and local communities, there has long been a divide in the way researchers and managers approach the study and administration of tourism in national parks and their gateway communities. In North America specifically, there is a tendency to focus on outdoor recreation planning in place of tourism planning in national parks research and management (Blahna et al., 2020). Moreover, local contexts and stakeholders, especially Indigenous communities, are often excluded or insufficiently incorporated into tourism and park planning despite widespread acknowledgement that their inclusion is critical to successful protected areas management (Dean, 1997; Eagles & McCool, 2002). It has therefore been posited that by focusing national park research and management on outdoor recreation as opposed to considering broader tourism systems, and by failing to properly engage local communities in planning and management processes, park managers may be overlooking important conditions and prospects for more proactive and informed conservation, recreation management, and sustainable tourism development (Cervený et al., 2020; Eagles & McCool, 2002). As such, there has been an increasing call for better integration of tourism planning and park planning, inclusion of tourism operators in national park management, and for national park managers to embrace their role as tourism providers in ways that will result in better economic, environmental, and social outcomes (Cervený et al., 2020; Leung et al., 2018).

While there has been valuable literature broadly connecting protected areas management, tourism management, and local perspectives on tourism in national parks published in the 21st century, much of the case-based research resulting in specific park management implications has remained either focused on outdoor recreation within parks or on tourism planning adjacent to parks (Eagles & McCool, 2002; Haukeland, 2011). This leaves us with an important need to understand local socioeconomic, environmental, and political contexts at the interface of tourism and parks to inform management while promoting cooperation among multiple stakeholders (Imran et al., 2014; Poudel et al., 2016). Case studies examining specific tourism activities or commercial tourism ventures operating within and around national parks are especially important representations not only of specific cases of tourism developments in parks, but of opportunities to understand best management practices to protect park resources and support surrounding communities. Specifically, more efforts should be made to source information from local tourism and protected areas stakeholders that takes into account the basic tenets of traditional park management while incorporating broader systems thinking from tourism development and planning (Eagles & McCool, 2002).

When studying nature-based tourism development in national parks, it is also important to consider various temporal scales of tourism instead of focusing solely on tourism destination conditions as they appear today. While longitudinal data measuring tourism trends or changes over time is often unavailable, documenting the historic roots of a tourism industry is understood to provide valuable insight into contemporary management of tourism resources (Mackenzie & Gannon, 2019; Walton, 2009). However, there remain few documented historical case representations of tourism development, and limited research in the field of tourism studies that has employed history methods (Mackenzie & Gannon, 2019). This gap in the literature leaves an

opportunity to build strong historic understandings of tourism cases that can provide an important framework through which to understand the nuances of complex systems, especially at the local or regional levels. Likewise, understanding how these contexts have changed over time can offer important insight into where a tourism industry has been, including what stages of development it has passed through and what baselines may provide appropriate standards against which to measure tourism trends (Butler, 1980; Walton, 1997).

With this in mind, this thesis seeks to integrate tourism planning, national park planning, and stakeholder perspectives of history and change into a case study of nature-based tourism and national park management. By exploring the case of Talkeetna, Alaska and Denali National Park and Preserve, this thesis contextualizes the quickly growing aviation tourism industry at the interface of the gateway community and the national park, while establishing a historic foundation of the flightseeing and air taxi tourism industry in the region. Specifically, this thesis emphasizes local contexts of the sustainability of tourism growth in Talkeetna and Denali by investigating: 1) the development of aviation tourism in the community and the national park, 2) stakeholder-identified indicators of change over time, 3) regional impacts of tourism growth, and 4) stakeholder perceptions of management challenges.

Case Study Setting

Nature-based tourism plays an incredibly important role in economic diversification and local livelihoods in Alaska, with one in ten jobs in the state held within the tourism industry, making up an important part of Alaska's employment picture (McDowell Group, 2018). Given the draw of Alaska's natural resources for tourists to the state, national parks play a particularly important role in Alaska's economy. In 2019, tourists to Alaska's most visited national park, Denali National Park and Preserve (DNA), spent an estimated \$613 million in local gateway

high-alpine glaciers, including North America's tallest mountain, Denali (20,310ft). The portion of the Alaska Range protected in DENA has tremendous scenic and recreational value, providing opportunities for world renowned mountaineering, climbing, and skiing, as well as flightseeing and glacier landing tours in some of the park's most picturesque landscapes. The National Park Service (NPS) is responsible for managing and stewarding a wide range of recreational experiences within this region of the Alaska Range through the 1980 Alaska National Interest Lands Conservation Act (ANILCA), including allowing for "reasonable access for mountain climbing, mountaineering, and other wilderness recreation activities" (P.L. 96-487, p. 550). Unlike congressionally designated wilderness in the Lower 48, ANILCA allows for motorized access to wilderness environments in Alaska – however, aircraft landings are not currently permitted within wilderness in DENA and are limited to designated glacier landing portals located just outside of the wilderness boundary (NPS, 2006).

Fixed-wing aircraft provide the only feasible access to many of the most sought-after destinations on the south side of the Alaska Range, including the five most common landing sites for air taxis and glacier landing tours: Ruth Amphitheater, Kahiltna Base Camp, Pika Glacier, Buckskin Glacier, and Eldridge Glacier (Figure 1-2). For the purpose of this thesis, air taxi services are classified as commercial flights in which guests are taken to a location to be dropped off or picked up, often for multiple days at a time, while flightseeing and glacier landing tours are flights in which day-use tourists are flown around the Alaska Range to enjoy the scenery, either remaining in the aircraft for the duration of the flight or disembarking for a short (~20-minute) backcountry glacier experience. Approximately 90% of air taxi services landing at the glacier landing portals in the Alaska Range originate from the Talkeetna Airport (Watson et al.,

2008), providing visitors with access to a variety of backcountry recreational experiences, including mountaineering, skiing, hiking, climbing, and camping (Tranel, 2006).

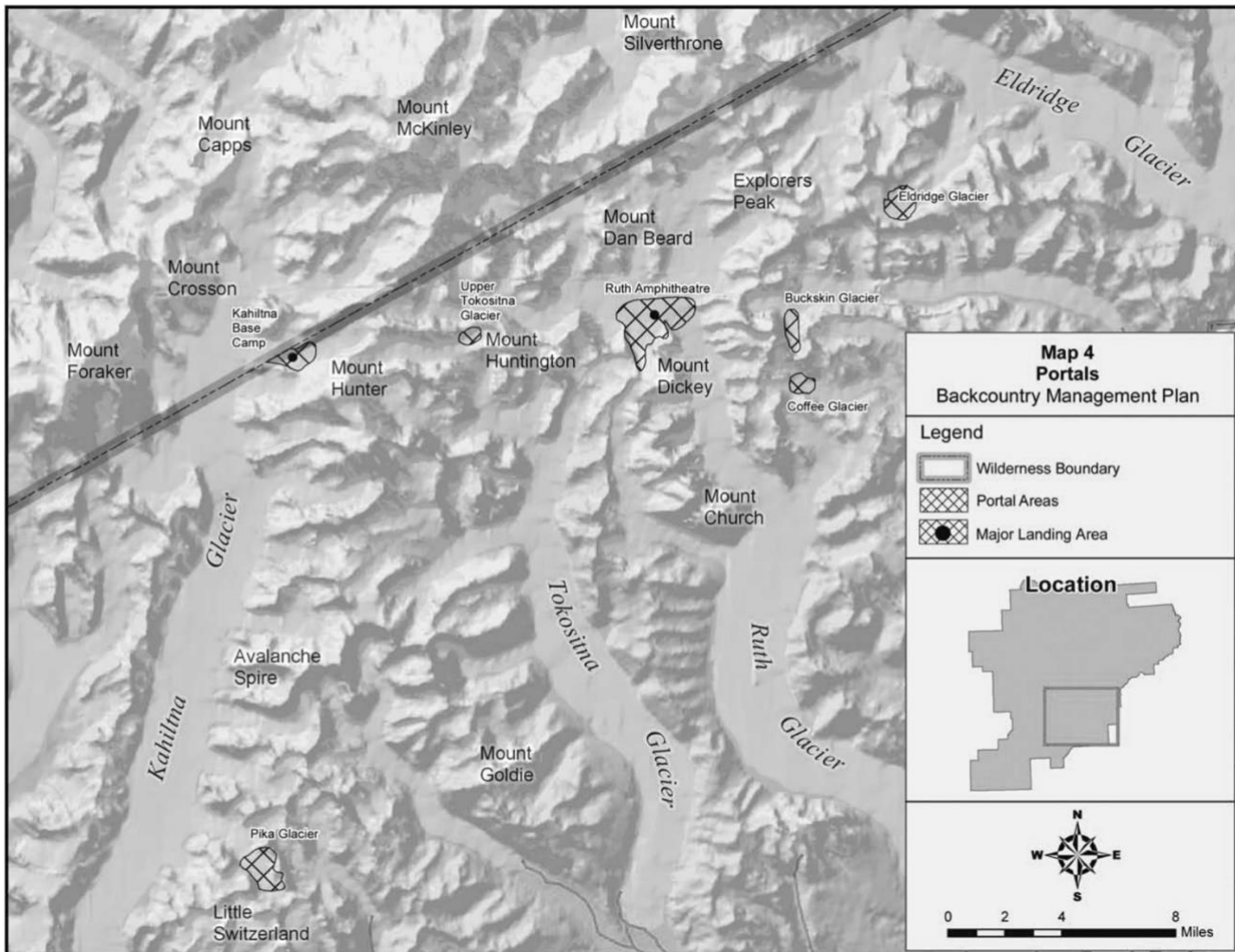


Figure 1-2. Backcountry glaciers and landing portals in Denali National Park and Preserve (NPS, 2006, p.39)

For many years, mountaineering constituted the majority of air taxi services in the region, however, there has been a sharp rise in flightseeing and glacier landing tours in DENA in recent years. The small gateway community of Talkeetna, AK serves as the hub for aviation tourism in the Denali region and is home to the majority of concession-holding air-taxi operators permitted to land within the boundaries of the park. Talkeetna represents a unique gateway community to the national park: despite being several hours' drive from the official national park entrance, the community acts as the entrance to the south side of the park, where park visitation is facilitated

through aircraft. Talkeetna's unique relationship with the national park makes community residents important stakeholders not only in the aviation tourism industry, but also in park management decisions regarding the backcountry glacier landing portals. Talkeetna's strategic location 45-miles southeast of the Alaska Range, its position as district headquarters for the Alaska Railroad, and its driving proximity to both Fairbanks (275mi) and Anchorage (115mi) has made it an extremely unique and increasingly popular tourism destination, especially with the rise of the package tourism industry in Alaska, where tourists are offered pre-arranged activities as part of larger travel itineraries such as cruises or train-based tours (Hobson, 1993). Consequently, the opportunity for day-use tourists to partake in flightseeing and glacier landing tours to Denali has catapulted Talkeetna onto the mass tourism scene, becoming an important stop for numerous package tourism itineraries with visits to the Denali region.

Together, Talkeetna and the glacier landing portals in DENA constitute the study site for this thesis, as the two are inextricably linked through the niche aviation tourism industry in the region. As tourism to DENA has intensified, Talkeetna has likewise experienced dramatic growth and change and as with many tourism-dependent rural communities around the world, tourism development has brought both dramatic economic gains and potential detrimental impacts to the town. This case study is thus designed to contribute to the growing body of literature on the sustainability of nature-based tourism in national park and gateway community settings.

Thesis Objectives and Research Questions

The overall objective of this research is twofold. First, this research seeks to address gaps in understanding of the history and development of flightseeing and glacier landing tourism in Denali National Park and Preserve and to describe how local stakeholders perceive the changes

in the industry over time. Second, this research works to uncover local stakeholder perceptions of the impacts of rapid growth in the aviation tourism industry in Alaska and perceived challenges associated with managing aviation tourism in the region.

To achieve the objectives of this research, four research questions are addressed:

R1: How do local stakeholders describe the history of aviation tourism in Denali National Park and Preserve?

R2: What do stakeholders identify as indicators of change associated with the aviation tourism industry in Denali? How do they perceive these changes over time?

R3: How do stakeholders describe the impacts of growth in aviation tourism in the Alaska Range and the gateway community of Talkeetna?

R4: What do stakeholders perceive to be the most important challenges to sustainably managing aviation tourism growth in Denali National Park and Preserve?

Thesis Organization

This thesis contains two separate articles formatted for publication that address these research questions. The first article in this thesis (Chapter 2) traces the history of the air taxi and flightseeing tourism industry in Denali, drawing on oral history, semi-structured interviews, and archival document analysis to describe the development of the industry and local perspectives of changes in the industry over time (R1 and R2). The tourism industry in Talkeetna is contextualized through broader global tourism trends to help understand and explain local changes in this niche tourism industry. The second article in this thesis (Chapter 3) examines the interactions between commercial tourism and national park management using the case of aviation tourism in Denali to describe stakeholder perspectives of the positive and negative effects (e.g. social, environmental, economic) of flightseeing and glacier landing tourism on both

the park and the gateway community of Talkeetna (R3 and R4). Finally, Chapter 4 is an overarching discussion and conclusion that summarizes the major findings of this thesis and, importantly, outlines implications for park managers, local community stakeholders, and future research in this field.

CHAPTER 2

TRACING THE DEVELOPMENT OF FLIGHTSEEING AND AIR TAXI TOURISM IN DENALI NATIONAL PARK AND PRESERVE: INTEGRATING STAKEHOLDER PERSPECTIVES OF HISTORY AND CHANGE

Abstract

Nature-based tourism destinations, including gateway communities to national parks, are currently undergoing rapid and dramatic changes. As tourism continues to rise in popularity and global climate change transforms the very natural environments that attract tourists, understanding the historical contexts of local-scale tourism and documenting ongoing complex processes of change, especially from the perspective of local stakeholders, is vital for sustainably managing tourism into the future. This paper attempts to advance the incorporation of historical understandings of tourism destinations and change over time into tourism studies, using the air taxi and flightseeing tourism industry in Talkeetna, Alaska and Denali National Park and Preserve as a case study. In the Denali region, the rise of day-use visitors in the aviation tourism industry has led to a dramatic increase in flightseeing tourism operations over the last two decades, yet the history of the development of this industry and changes associated with the shift in local tourism operations have, until now, remained undocumented. In this paper, interviews with stakeholders uncover local understandings of the development of aviation tourism in the region and reveal important indicators of change in the industry over time. Results provide valuable stakeholder-sourced insight into transformations occurring within local social, environmental, and economic structures and explore the potential management implications of these changes.

1. Introduction

Tourism is recognized as a highly complex system of increasing social, economic, and environmental importance, globally (Budeanu et al., 2016; UNWTO, 2013). A phenomenon composed of diverse stakeholders, geographies, and processes encountered through travel and leisure experiences, tourism is influenced by various socio-cultural factors shaped by both visitors and hosts at any given destination (Archer et al., 2005; Butler, 2004). Tourism is also dynamic and influenced by local, regional, and global socioeconomic, political, and environmental trends. As such, observed changes in tourism vary considerably from case to case and can strongly affect host communities, compelling them to negotiate local meanings of place, progress, development, and sustainability (Ogorelc, 2009; Stylidis et al., 2014).

Over the last several decades, social sciences have contributed greatly to our understanding of tourism systems through fields including geography, economics, hospitality management, political sciences, and tourism studies (Hall & Page, 2014). More recently, there has been a growing movement of historical analysis in tourism research, stemming from the recognition of gaps in the literature regarding the historic contexts that shape tourism (Mackenzie et al., 2019; Towner, 1996). As with any complex phenomenon, understanding where a tourism venture began is a critical component of making present-day management decisions for the future of an industry (Walton, 2009). Likewise, understanding how these contexts have changed over time offers important insight into where a tourism industry has been, including what stages of development it has passed through and what baselines may provide appropriate standards against which to measure tourism trends (Butler, 1980; Walton, 1997). In all facets of research and management, a strong historic foundation provides an important framework through which to

understand the nuances of complex systems, especially at the local or regional levels, leaving much room for tourism case studies to be examined through historic lenses.

When considering the history and development of a tourism destination, it is important to acknowledge that tourism does not occur in isolation: instead, tourism is shaped by public and private interests from local to global scales and is affected by consumer demand, economic growth, financial and legal structures, and institutional priorities (Cervený, 2008; Milne & Ateljević, 2001). Nevertheless, understanding local-scale perspectives, contexts, and responses to change is critical for tourism management and community resilience (Byrd, 2007; Wilson et al., 2018). By tracing the history of tourism development as presented by local voices, we have the opportunity to situate a niche tourism industry within broader trends in regional and global tourism. Moreover, understanding what local stakeholders identify to be indicators of change within a tourism system offers valuable stakeholder-sourced insight into the perceived transformations occurring within local social, environmental, and economic structures, and what the positive and negative impacts of these changes may be (Stewart & Draper, 2007).

Aviation tourism in the Denali region of Alaska provides a worthwhile case study of stakeholder perspectives of history and change. The purpose of this paper is to explore the complexities arising within the air taxi and scenic flight tourism industry in Talkeetna, AK and Denali National Park and Preserve, seeking to answer the following research questions:

R1: How do local stakeholders describe the history of aviation tourism in Denali National Park and Preserve?

R2: What do stakeholders identify as indicators of change associated with the aviation tourism industry in Denali? How do they perceive these changes over time?

2. Literature Review

2.1 History and Tourism

While it is widely acknowledged that tourism is a complex and multidimensional phenomenon that requires local understanding for successful management, academic literature incorporating local perspectives about the history of tourism destinations, products, and industries is limited (Bremner & Wikitera, 2016; Mackenzie et al., 2019). For decades, there has been a call for more attention to be paid to the historic foundations of tourism from both the field of history and the newer field of tourism studies (Towner, 1988), yet important gaps remain regarding historical understandings of most tourism destinations and products. John Walton, one of the seminal scholars of tourism history, has critiqued tourism studies for remaining “...essentially present-minded, building abstract developmental models with no attention to historical specificity” (Walton, 1997 p. 564). While perhaps harsh, Walton’s critique holds true today, with considerable research being published on tourism destination trends and the economic dimensions of tourism but few examples of documented historical case representations of tourism development (Hanpachern, & Chatkaewnapanon, 2013; Mackenzie & Gannon, 2019).

As Walton (2009) argues, the study of tourism “cannot be understood without reference to what has gone before; nor ... to predict or pre-empt the future without achieving some understanding of where we, and others have come from” (p. 115). Despite recognition that historical understandings of tourism destinations can offer valuable insight into tourism management, few academics working in the field of tourism studies have employed history methodologies in their work. Oral history, in particular, has been identified as a methodological approach with the potential to fill important gaps in tourism research by documenting narrative accounts of tourism growth and development (Trapp-Fallon, 2003). In addition to documenting

stakeholder narratives of historical events, oral history can offer a distinctive research approach in tourism studies that gives voice to individuals often neglected by social science research and tourism management decisions (Trapp-Fallon, 2003). As such, there remains an important opportunity to integrate historical methodologies such as oral history into tourism studies to further contextualize tourism destination cases through local voices and trace the development of tourism industries over time.

2.2 Tourism Development and Local Perspectives: Theoretical Background

Perhaps the most frequently utilized model within tourism research is the Tourism Area Life Cycle (TALC) model, first proposed by Butler (1980). The TALC model is a relatively simple approach to describing a number of discernable stages of development that a tourism area passes through in its lifetime: exploration, involvement, development, consolidation, stagnation, and decline or rejuvenation (Butler, 1980). Literature testing the TALC model in tourism destinations around the world is extensive, with numerous studies using the TALC to characterize the development of resorts, destinations, and specific tourism products (See Lagiewski, 2006 for a comprehensive review). While the model has proved useful in explaining some of the dynamics of tourism development in diverse settings, there are ongoing critiques regarding the limited temporal lens of the model and there remains little consensus about its validity and applicability to all scenarios (Breakey, 2005; Lagiewski, 2006). Some scholars have noted that the model is restrictive given its reliance on visitation as the primary metric by which to measure tourism development, often missing the nuances associated with community development and broader social and political factors affecting a tourist destination (Baum, 1998; Breakey, 2005; Butler, 2006). Others draw attention to the model's neglect of local resident perceptions and attitudes toward tourism development, which have been identified as a prerequisite for sustainable tourism

management and are increasingly recognized as a critical component of any comprehensive understanding of tourism (Jamal and Getz 1999; Ogorelc, 2009; Sharpley, 2014). Finally, the reliance of the TALC model on quantitative data rather than narrative accounts of tourism development and historical trends also leaves important gaps in the research, specifically where qualitative data can be utilized to contextualize the complexities of local resident perceptions of tourism development and change over time (Breaky, 2005).

Some scholars have attempted to address shortcomings of the TALC by emphasizing tourism trends that extend beyond the scope of the model to explain development trajectories and potential future directions for tourism institutions. For example, several scholars have drawn on conceptual ideas from evolutionary economic geography (EEG) to examine the temporal and geographical evolution of tourism economic systems (Brouder & Eriksson, 2013; Ma & Hassink, 2013). Moreover, numerous alternative predictive models and theoretical frameworks expounding local resident attitudes toward tourism development have also been proposed to address potential weaknesses of the TALC model: those applied to tourism research include Doxey's Irridex Model (1975), Social Exchange Theory (Ap, 1992), and the Tourism Impact Attitude Scale (Lankford & Howard, 1993). These theoretical frameworks and associated research instruments have been employed in various tourism settings in an attempt to measure local attitudes toward tourism and to clarify the relationship between tourism impacts and resident perceptions of tourism (Wang et al., 2006) yet none have proven to be a one-size-fits-all model for measuring local perceptions of change in tourism destinations.

As some tourism researchers continue to search for a universal model that can predict the development and change in tourism over time and garner a comprehensive understanding of local attitudes toward tourism, other scholars assert that a universal model may not exist for

research into either aspect of a tourism destination, as each case involves unique stakeholders, local contexts, and unique elements of social, geographic, environmental, political, and economic landscapes (Kastarlak & Barber, 2012; McCool & Moisey, 2008; Mellon & Bramwell, 2018; Sharpley, 2002). Such views tend to emphasize that each destination is ever-changing and has its own distinctive culture, stakeholder attributes, and values built on shifting contexts and local attitudes, making generalizable research difficult, if not impossible. Regardless of whether a universal model is feasible, there is widespread agreement among researchers that including local stakeholder voices, perspectives, and opinions in validating any account of a tourism destination's development is critical to understanding the nuances of a tourism industry and ultimately to successfully manage tourism into the future (Wilson et al., 2018). Even so, few studies give voice to local residents to describe community perspectives of the history, development, and change over time within tourism destinations (Brouder, 2014; Mackenzie, et al., 2019). While the literature measuring local attitudes toward positive and negative tourism outcomes is extensive (Sharpley, 2014), studies looking back in time at temporal scales beyond the most immediate tourism circumstances that relate local perspectives to broader tourism development are limited.

This study therefore addresses gaps in existing literature on tourism development in two important ways. First, by drawing on qualitative and oral history methodologies to uncover local understandings of change over time, this research gives a voice to the local community in defining the history of an industry with valuable implications for potential future tourism management. Second, this research demonstrates potential advantages of breaking beyond predictive models of tourism growth and rigid frameworks for understanding tourism development, instead allowing the description of development to emerge organically from

community stakeholder voices, documenting unique local knowledge (Stewart & Draper, 2007). This may be particularly important in gateway communities to national parks where little research including local stakeholders has been conducted to document the rapidly changing nature of tourism in these communities (Choe & Schuett, 2020; Howe et al., 1997). As tourism systems continue to change and the popularity of nature-based tourism grows dramatically, documenting local understandings of complex processes of change in tourism in these places, and situating them within the larger global tourism industry, will be imperative for management at all scales (Eagles & McCool, 2002).

3. Research Design and Methods

3.1 Study Site

Denali National Park and Preserve (DNA) is the largest and most visited national park in Alaska, attracting over 600,000 visitors a year and protecting 6 million acres of Alaska's interior wilderness (NPS, 2020a; NPS, 2006). It is this vast wilderness that draws many visitors to the Denali region, with the most common visitor activities including wildlife-viewing, sightseeing, hiking, and nature photography (Fix et al., 2013). Most visitors enter the park via the Denali Park Road, a 60-mile road that provides the only ground access into DNA. However, the southern half of the national park is accessed almost exclusively by air, offering a dramatically different vantage point of the landscape and access to some of the most remote yet coveted backcountry destinations within the park.

The vast high-alpine glaciers located on the south side of the Alaska Range, an east-west arc of mountains home to North America's tallest peak, Denali (20,310ft), are home to a popular aviation tourism industry that is unique not only in North America, but around the world. While commercial aviation in national parks is normally governed by the National Parks Air Tour

Management Act (2000) which requires Air Tour Management Plans for all air tour operations occurring over national parks, NPS sites in Alaska are specifically excluded from the legal requirements set forth in the Act. Although Alaska contains a significant portion of National Park System land by area, the state is uniquely dependent upon air services as a critical form of transportation and backcountry recreation, and it was therefore deemed inappropriate by local and federal politicians to require the same regulations as in the Lower 48 (Lane, 1996).

Overflight scenic tours are consequently not managed by the NPS; instead, the Federal Aviation Administration (FAA) has exclusive jurisdiction over the airspace above DENA. However, the NPS has jurisdiction to manage aircraft landings within the boundary of DENA and currently operates a concession permitting system to regulate aircraft landings within the park (NPS, 2006).

Several glaciers within the DENA boundary in the heart of the Alaska Range are home to ice runways where small aircraft land to drop off visitors for multi-day backcountry adventures or to offer a quick scenic landing for guests on glacier landing tours (Watson et al., 2008). Scenic landings generally last 20 minutes and are opportunities for visitors to disembark the plane onto a glacier and have a short encounter with the deep wilderness of Denali, while multi-day users enjoy world-class ski mountaineering and climbing on some of the most challenging big walls in the world. Outdoor enthusiasts have accessed the area by aircraft for decades, and today the south side glaciers are well known for their outstanding climbing and skiing opportunities for self-sufficient and accomplished mountaineers. Under the current Backcountry Management Plan (NPS, 2006), the Ruth, Kahiltna, Pika, Buckskin, and Eldridge Glaciers are designated as the primary glacier landing portals, where aviation tourism is concentrated within the park. In addition to the air taxi services offered to provide guests with the opportunity to land on a glacier

in Denali, flightseeing tourism in the region has grown considerably in recent years. Flightseeing tours are excursions in which tourists are flown into the Alaska Range for short scenic flights above the glaciers and mountains.

Talkeetna, AK, is home to the majority of concession-holding air-taxi operators permitted to land within the boundaries of DENA. Situated on the traditional territory of the Dghelay Teht'ana, the community that is today called Talkeetna sits at the confluence of the Susitna, Talkeetna, and Chulitna rivers. Talkeetna is an unincorporated community whose year-round population hovers around just under 1,000, though its population can double or triple in the summertime due to seasonal jobs facilitated by the tourism industry (Talkeetna Chamber of Commerce, 2019). The community acts as a unique gateway to the national park: despite being several hours' drive from the official national park entrance, Talkeetna serves as an important jumping off point for the south side of the Alaska Range. Approximately 90% of access to the glacier landing portals in DENA originates from the Talkeetna Airport (Watson et al., 2008), making community residents important stakeholders in not only the aviation tourism industry in DENA, but also in park management decisions regarding the backcountry glacier portals.

3.2 Research Design

This research is designed as a qualitative case study, drawing on in-depth semi-structured interviews and document analysis as the primary sources of data. According to Creswell (2014), a case study is a unique strategy of inquiry that allows researchers to explore in-depth, time-bound phenomena through the collection of detailed, context-specific information. Case study research design links data to research questions, providing a conceptual framework for a specific case (Yin, 2003). A case study can therefore be understood as the study of a particular subject in order to understand its activity and complexity within specific circumstances (Stake, 1995). As

such, a case study design can help meet this study's goal of identifying stakeholder perceptions of history and change within the aviation tourism industry in the Denali region. Case study design also allows for practical application of research results to a real-life situation (Yin, 2012), helping to make this research pragmatic for community development in the Denali region and for management decisions regarding DENA.

I selected qualitative methods for this research for a number of reasons. First, while change can be measured using quantitative techniques, understanding the historic context and underlying reasons for change in a destination benefits from a qualitative approach in which respondents can describe the nuanced historic underpinnings of tourism development (Breakey, 2005). I used both semi-structured interviews and oral history to achieve this goal, as both methods provide unique opportunities to capture complexity and depth of contextual meaning behind events, actions, and trends (Miles et al., 2014). Whereas semi-structured interviews generate important information about the targeted topic for this study, oral history methodology emphasizes the collection of personal stories, employing a history-driven approach to studying the past through autobiographical narratives (Hesse-Biber & Leavy, 2006). Oral history is specifically important for this case study, as the aviation tourism industry in Talkeetna is currently undergoing a shift in generations, and some informants that possess invaluable historic information may not be able to provide important context in the years to come (Trapp-Fallon, 2003). Finally, in the spirit of allowing local stakeholder voices to be meaningfully incorporated into the research results, qualitative methods were deemed most appropriate as they allow stakeholders to use their own voices rather than adhering to a pre-developed survey instrument (Canosa et al., 2016; Wilson et al., 2018).

In addition to qualitative interviews, I utilized document analysis, specifically of news articles, government reports, and historical documents, to triangulate and reinforce emerging themes in the data. Document analysis is understood to be valuable not only because of the context in which a document was written, but also because it offers background information to understand alternative paths of inquiry, such as interviews (Patton, 2002).

3.3 Data Collection and Analysis

Interview participants were selected for this study using purposive and snowball sampling as the primary sampling methods. Purposive sampling is a technique widely used in qualitative research for the identification and selection of information-rich cases, allowing for the most effective use of limited resources (Patton, 2002). Purposive sampling involves identifying and selecting individuals that are especially knowledgeable about or experienced with a phenomenon (in this case, aviation tourism in the Denali region) and recruiting them as interviewees for the project. I also recruited interviewees using a sampling technique commonly known as ‘snowballing’ where informants identify additional interviewees, allowing for accurate representation and engagement of community stakeholders while leaving flexibility to follow new opportunities that may unfold throughout the course of the research (Creswell, 2014). In total, I conducted 22 interviews from July – October 2020, with 12 interviewees identified through purposive sampling and 10 identified through snowball sampling (Table 2-1). All interviews were conducted over the phone and were recorded using a call recording application, then uploaded to a computer and transcribed. As the primary researcher, I conducted each of the interviews, helping to establish familiarity with data (Braun & Clarke, 2006).

Interviews were organized around the aforementioned research questions and a corresponding semi-structured interview guide (Appendix) composed of questions arranged into

four key interview topics: history and development of aviation tourism in Denali; stakeholder perceptions and experiences of change over time; the importance of glaciers to Denali's wilderness; and stakeholder perspectives of visitor experiences at the glacier landing portals.

The interviews followed the flow of the interview guide, drawing on pre-established, open-ended questions that explored the topics mentioned above. During interviews with key-informants with lived experiences during the development of aviation tourism, oral history methods were also employed, allowing for a more unguiding interview approach to uncover personal stories and historical narratives (Hesse-Biber & Leavy, 2006). Given the nature of the case being studied and the specialization of the informants, interviews were in-depth, generally lasting longer than 45-minutes each (Creswell, 2014).

Interview	Length	Gender	Stakeholder Attributes
1	1:34:00	M	Retired NPS staff
2	1:02:03	M	Retired aviation laborer in the Denali region
3	1:14:25	M	Former mountaineering guide
4	2:58:12	M	Retired pilot/air-taxi operator
5	0:50:03	F	Community member
6	0:49:52	M	Climbing guide
7	0:55:57	M	Climbing guide
8	1:22:05	M	Pilot/air-taxi operator
9	1:01:13	M	Pilot/former air-taxi operator
10	0:45:45	M	Pilot
11	1:18:11	M	Pilot/air-taxi operator
12	0:57:36	F	Pilot/air-taxi operator
13	0:49:55	F	NPS staff/resident of Talkeetna
14	0:49:57	F	Air-taxi employee
15	1:12:33	M	NPS staff
16	1:10:39	F	Former NPS staff
17	0:40:55	F	Air-taxi employee
18	0:52:55	F	NPS staff/resident of Talkeetna
19	0:48:56	M	Resident of Talkeetna/tourism operator
20	1:11:39	M	NPS staff/pilot
21	1:02:22	M	Pilot/air-taxi operator
22	0:41:01	F	NPS staff

Table 2-1: Interview lengths and stakeholder attributes

I initially transcribed audio recorded interviews using an online transcription software, then read and corrected each transcript while simultaneously listening to the interview audio file to ensure accuracy and gain further familiarity with the data. Data analysis was comprised of qualitative coding of the interview transcripts. In vivo coding, a process in which codes are built from the language of the participants themselves, was used as a first-cycle coding method to become acquainted with participant perspectives and actions (Saldaña, 2016). I then analyzed interviews through a combination of first- and second-cycle coding techniques including descriptive and process coding (Miles et al., 2014). After coding 6 interviews from stakeholders representing different positions across the aviation tourism industry, I developed a codebook that I subsequently used to code the remaining interviews. Data analysis was an iterative process through which I conducted several cycles of coding over the course of data processing, keeping detailed memos throughout the analysis (Miles et al., 2014). Memos allowed me to keep track of potential biases, along with seeking multiple sources to contextualize historical events, including searching for negative evidence where possible (Miles et al., 2014).

Finally, technical and non-technical literature was used as an additional source of empirical data to uncover meaning and reinforce relevant historical insights revealed in the interviews (Bowen, 2009). I therefore cross-referenced interview results with other empirical sources including historical documents, library archives, news stories, whitepapers, and public media for validation. Using triangulation and information collected through different methods can help reduce doubt that findings are simply an artifact of a single method, a single source, or a single investigator's bias (Patton, 1990). Document analysis is an important component of strengthening and supporting interview-based qualitative research, as documents can provide supplementary data, background information, and reference data that can no longer be observed

(Bowen, 2009). However, it is also important to acknowledge potential biases associated with document analysis from researchers and the initial authors of a document (O’Leary, 2014).

4. Results

These results are broken into two sections based on the research questions guiding this study. The first research question focused on the history and development of aviation tourism in DENA: accordingly, the first section of these results works to synthesize and historically contextualize narratives of aviation tourism development in Talkeetna and prominent historic events identified through oral history interviews and archival data. The second section, guided by the second research question, explores stakeholder identified indicators of change associated with aviation tourism, highlighting the prominent themes that emerged about the nature of recent changes within the air taxi and glacier landing tourism industry and indicators of change identified by local stakeholders.

4.1 R1: A Brief Narrative History of Aviation Tourism in Talkeetna

When asked to describe the history of aviation tourism in Talkeetna, many interviewees emphasized the importance of the early history of aviation in the state of Alaska, as well as the establishment of Talkeetna as a community, in shaping the industry seen today. Stakeholder narratives and oral histories of the development of aviation tourism interwove the earliest days of aviation in the state, long before tourism took hold, with the mining history and settlement of Talkeetna, noting several prominent historic figures and events, outlined in Table 2-2. It is important to recognize that Talkeetna is located within Dena’ina Elnena and that Native Alaskans occupied the land now known as Talkeetna long before its settlement by prospectors of European descent in the 19th century. Today, and throughout the story of its aviation history, Talkeetna is a primarily white community, but the region maintains important cultural ties for

local Indigenous groups. While there are countless historical documents, biographical accounts, and novels describing the history of the region in detail, the events identified by interviewees as being particularly significant to the development of aviation tourism in Talkeetna have been assembled here.

Year	Event/Developments
	Dena'ina live in the Denali region and steward Dena'ina Elnena since time immemorial, including around the confluence of the Susitna, Talkeetna, and Chulitna Rivers where Talkeetna stands today
<i>1885 – 1950: Establishment of Talkeetna and Aviation in the Denali Region</i>	
1886	Prospectors begin arriving in the Cache Creek, Iron Creek, and Broad Pass districts near present-day Talkeetna, establishing a trading post
1920	Alaska railroad opens for operation in Talkeetna, AK
1932	Joe Crosson lands on the Muldrow Glacier in support of the Cosmic Ray Expedition, marking the first glacier landing in DENA
1938	Bob Reeve lands on a glacier outside of Valdez, AK, marking the first ski plane landing on a glacier in Alaska
1940	Talkeetna Village Airstrip opens for operation
1946	Hudson Air Service established by Glen Hudson, later taken over by his brother Cliff Hudson
1947	Talkeetna Air Service established by Don Sheldon
<i>1950 - 1990: Establishment of Talkeetna and Aviation in the Denali Region</i>	
1954	Glacier Pilot Don Sheldon makes first commercial flight from Talkeetna to Kahiltna Glacier, thenceforth the standard approach for Denali climbers
1964	Completion of the Talkeetna Spur Road construction, connecting Talkeetna to the Alaska road system changing the way most people reach Talkeetna
1976	Doug Geeting Aviation established
1980	K2 Air Service established
1980	The Alaska National Interest Lands Conservation Act (ANILCA) passed, expanding DENA
<i>1990 - Present: Shift to Industrial Scale Tourism in Talkeetna</i>	
1997	Mt. McKinley Princess Wilderness Lodge opened north of Talkeetna, AK
1999	Talkeetna Alaskan Lodge opened outside of Talkeetna in 1999

Table 2-2: Timeline of historically significant events in the history of aviation tourism development in Talkeetna, AK.

Aviation played an extremely significant role in the establishment of modern Alaska, as air travel opened up previously remote and inaccessible areas of the state when transportation infrastructure was sparse or non-existent (Stein, 1982). Many of the first aviators in Alaska were prominent figures in the dawn of commerce in the territory, laying the groundwork for an

aviation industry in Talkeetna that would one day manifest into a bustling tourism venture. In the early 20th century though, Talkeetna was extremely remote, accessed primarily by hiking, horses, boats, dog sled teams, and after 1920, the Alaska Railroad. Despite its remote location, Talkeetna gradually became a major supply center for miners in the Susitna-Cache Creek region, and as early aviation became more widespread through Alaska, the new form of transportation was adopted in the region, greatly reducing travel time over the harsh terrain (Sheldon, 1999). In 1940, the young community of Talkeetna, previously home to only makeshift gravel bar airstrips along the rivers, finished building the Talkeetna Village Airstrip which brought a permanent presence of aviation to the community. The Talkeetna Village Airstrip was crucial to developing Talkeetna given its contribution to the economic development of the town as a center of supply and a departure point to the surrounding backcountry, until the larger Talkeetna Airport (TKA) opened in 1951 (NPS, 2002); today it remains an important cultural feature in Alaska's aviation history.

While aviation in Alaska was predominantly focused on utility and essential transportation in the first half of the 20th century, the unique opportunities of seeing the vast mountain ranges in Alaska from the air were not missed in the early days of aviation. As early as the 1930s, historical accounts of flying over Alaska's vast territory document the scenic resources of the state. As one 1935 newspaper article describes:

“The flight through the Tanana Valley, outlined on the right by a mountain range with peaks piercing the sky is beautiful, with Mt. Hayes, majestic Mt. McKinley, the Richardson Highway and the Donnelley Dome all providing interest and variety on the most scenic air trip imaginable. This Juneau-Fairbanks air route should not only prove of inestimable benefit to the Territory but will provide tourists with a gorgeous panoramic view of Alaska” (Morgan, 1935, p. 3).

In the 1940s, recreational and scenic resources in Alaska were already being documented for tourism purposes, and aviation was being recognized as a critical form of access to these

recreational resources. A 1946 Alaska Development Board report notes that: “Now that the war is over, the airplane doubtless will play a new role in Alaska as a tourist carrier... such service will also lead to creation of many new tourist stopover resorts” (Anderson, 1946, p. 3). However, it would be several more decades before aviation became its own tourist attraction in the Denali region.

Describing the history of aviation tourism in Talkeetna, interviewees drew a stark contrast between the “traditional days” of aviation and the more modern tourism-driven aviation industry. When considering the early days of aviation in Talkeetna, interviewees referred to air taxi operations as essential services and practical forms of transportation – specifically for homesteaders, hunters, fishermen, and miners. Respondents repeatedly noted that gradually throughout the 20th century, air taxi operations started to shift from these early forms of aviation in the last frontier toward a more mainstream tourism venture influenced by regional marketing efforts and global social and economic forces.

Two individuals – Don Sheldon and Cliff Hudson – were consistently identified as key figures responsible for establishing a culture of aviation in the region during these early days. Sheldon and Hudson are widely regarded as aviation pioneers in the Alaska Range and shared many ‘firsts’ in the Denali region, making new landings on unnamed glaciers and lakes in and around DENA. In addition to their pioneering of the Alaska Range, Sheldon and Hudson were also the first pilots to operate commercial air taxi services in Talkeetna. Hudson Air Service was opened in 1946 by Cliff’s brother Glen, and Don Sheldon opened Talkeetna Air Service in 1947. Hudson and Sheldon were widely acknowledged by interviewees to be key figures in developing an aviation culture in Talkeetna, however, they were generally not credited with the development

of the scenic flight tourism industry that exists today, as they sold very few flightseeing trips. As one interviewee describes:

Basically, [Don Sheldon and Cliff Hudson] were just opportunistic pilots so wherever there was a drive for people to go, they would take them. Whether it was in a float plane, they'd go out to the lakes and fly hunters and fishermen and adventures and people that had cabins... and then ski flying to those same places on lakes in the winter months. And there were some miners around and some exploration for minerals and gold and that type of thing. But most of it was just people going out to their cabins. (Interviewee_08, Pilot)

While tourism had yet to pick up in Talkeetna in the 1940s, several interviewees regard the 1950s as an important turning point for aviation in the Denali region, specifically through the growth of mountaineering in the Alaska Range. In the early 1950s, Bradford Washburn, a famous geographer and photographer, was working throughout the Alaska Range to map and photograph Mount McKinley (Denali) National Park. These trips garnered national attention, bolstering DENA's status as a northern jewel in the United States. In 1951, Washburn completed the first ascent of the West Buttress Route to the peak of Denali, which would prove to be the most popular climbing route on the mountain. This historic first ascent, paired with the surging of the Muldrow Glacier in 1956-57 that made the previously most popular route up Denali impassible, contributed to a rise in popularity of Denali mountaineering. The newly explored West Buttress Route starts on the Kahiltna Glacier in the Alaska Range, a basecamp only viably accessible via aircraft. Whereas mountaineers used to access the highest mountain in North America by walking for days over tundra and peatland to the Muldrow glacier, by the end of the 1950s, the mountain was being accessed almost exclusively by aircraft, solidifying the critical importance of bushcraft in the Denali region. Gradually, from this important turning point through the 1970s, the majority of air services in Talkeetna evolved from providing essential

transportation for homesteaders and miners to providing transportation for recreation, specifically mountaineering in the Alaska Range. One NPS staff describes:

Air taxi operators have been an important component of tourism in this area, and climbing, since 1951 when Washburn first landed up on the [Kahiltna] glacier to climb the West Buttress. That was the opening of it. And the air taxis on this side kind of began as taxi pilots, not necessarily flightseeing as we see it today - they were more putting people into the range for climbing. (Interviewee_20)

This shift marked the first stage of a major transition in aviation in the Denali region, moving from being practical air taxi services for homesteaders to transportation for climbers and skiers into the Alaska Range. As news of the West Buttress Route garnered national and international interest, Talkeetna soon became known as the major jumping off point for Denali adventures, with air taxi services to the Alaska Range gaining ground as an important contribution to the development of the region.

Despite the growth in popularity and curiosity regarding the Alaska Range, interviewees described that until the late 1970s, aviation in Talkeetna remained small-scale and informal. While the Alaska Range contained magnificent scenery, scenic flight tourism had yet to grab hold, visitation to the Denali region was still sparse enough to make flightseeing a financial strain on operators, and there was little to no marketing or investment into an organized tourism industry in Talkeetna. At the same time, several interviewees described the state of scenic flights at the time as one pilot in the region depicts: “Nobody really knew about flightseeing or even imagined someone would pay for a ride to go look at the mountains in the early days” (Interviewee_12). Several interviewees emphasized the fact that air taxi operations were not lucrative until the late 20th century, nor were they formally run businesses as we see today. For example, one long-time resident of Talkeetna states:

If you wanted to hire an air taxi in Talkeetna prior to 1975 or so, you had to ask directions to where the air taxi company was – it was operated out of the person's home – and there wouldn't even be a sign that said this was an air service. It was a very casual thing and there wasn't a great deal of business. (Interviewee_04)

As this transformation was taking place in Talkeetna and the Denali Region though, tourism as a whole was on the rise in Alaska. In 1975, the Alaska Visitors Association formed its first marketing council and by 1977 the total number of visitors to Alaska topped half a million a year (Lowe, 2013). The number of climbers on Denali also surged, from 300 in 1975 to 900 in 1977 (NPS, 2020). It was during this time that opportunistic air taxi operators started to realize the prospect of scenic flightseeing tourism and to market their air services as such. In the 1980s, advertisements for scenic flights began appearing in newspapers across Anchorage, Seward, Talkeetna, and Fairbanks, encouraging tourists to come to Talkeetna and take a flightseeing tour into the Alaska Range. As one early aviator and air-taxi operator in Talkeetna explains:

I kept wondering why there was no advertising [for scenic flight tours] because once I saw Denali and got up there, I kept thinking, God, this would be... I'd love to take my parents up here. And I don't know, I think a whole bunch of people would love to see this... The first thing I needed to do was get the word out. And so I had a friend of mine who's dad had a printing shop and I put together a little three page foldout brochure and I just put them down in the Anchorage Visitors Center, and just all over. And as soon as I got the brochures out, the phone started ringing. And that was how it all kind of started. (Interviewee_09)

By the 1980s, there were several new air services operating in Talkeetna, with mountaineers making up a substantial component of the air taxi business and flightseers increasing steadily year-by-year. In the last decade of the 20th century, aviation tourism caught wind and, with a booming global tourism industry, tourism in Talkeetna grew exponentially. Tourism marketing also picked up throughout Alaska and the steady growth in tourism continued to be enabled through widespread efforts to attract tourists to the Denali region for its vast wilderness environments. Throughout the 1990s, revenue from flightseers began to vastly outgrow business

from climbers for aviation operators (Figure 2-1). Widespread agreement by interviewees reveals that the early 1990s acted as a tipping point for the aviation tourism industry in Talkeetna and the Denali region, shifting from a casual tourism operation to industrial-scale tourism. One climbing guide illustrates this shift:

Yeah, I would have to say that the beginning of the mid-nineties is when I really noticed a more exponential growth. I could be off by a few years - I was there in 1993, for instance. I remember toward the end of June, just the crowds of people in the streets which I'd never really seen before. And it wasn't a holiday. We just didn't see those kinds of crowds that much in the eighties. And it was a regular thing in the nineties. (Interviewee_07)

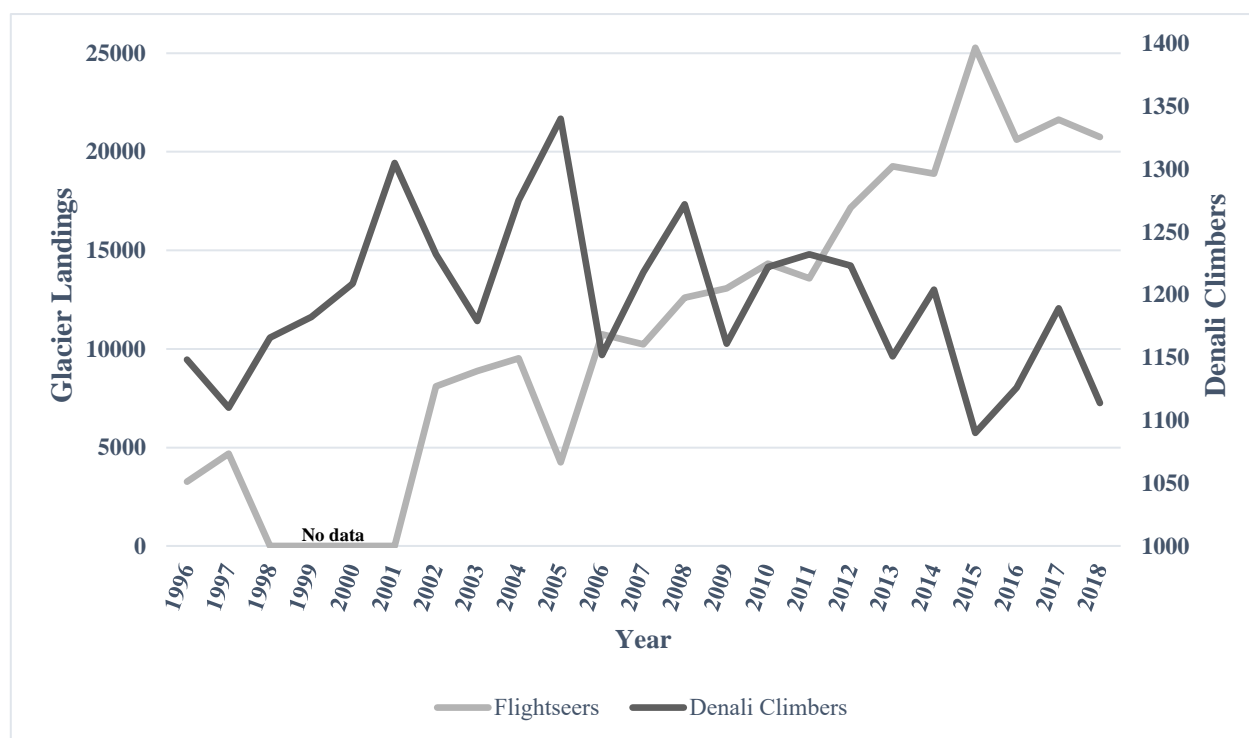


Figure 2-1: While the number of tourists partaking in a flight seeing tour is increasing, climbers on Denali is remaining relatively stagnant (NPS, 2016; NPS, 2020a).

Interviewees explicitly mentioned the influence of the cruise tourism industry on the growth in aviation tourism from the 1990s to 2020, noting the important role that package tourism played in the growth and economic success of the industry. During this time period, large cruise companies began building hotels in the Denali Region, including outside of Talkeetna, to

capitalize on the popularity of DENA as a destination and the draw of the largest mountain in North America. These often-large-scale hotels added significant accommodation capacity to the region and drew in new visitors, bringing with them more flights every summer. One air taxi operator notes that “By 2010 [flightseeing tours] had become one of the bucket list things you have to do when you come to Alaska.” (Interviewee_08)

As of the summer of 2016, Talkeetna was in the top ten most visited destinations in Alaska, with flightseeing reported as the most common tourist activity (McDowell Group, 2017). Today, flightseeing stands as a major industry in Talkeetna and generates a significant amount of revenue for the community, while also providing the primary form of access to the southern part of DENA. There are currently four air taxi operators permitted to land on backcountry glaciers in the Denali region, and according to the interviewees, flightseeing and glacier landing tourism accounts for the vast majority of business for these air services. This marks an important shift from the mid 20th century and speaks to the scope of the changes taking place in the region as a result of tourism growth. Such changes are discussed in the following section.

4.2 R2: Stakeholder-Identified Indicators of Change Over Time

In addition to the narrative representation of the history of aviation tourism in Talkeetna, there were several major themes of indicators of change that emerged from stakeholder interviews. These themes can be classified as changes in air taxi operations, changes in Talkeetna, changes in wilderness experiences, and climate change. These topics and their relevant subthemes are explored in detail below.

4.2.1 Changes in Air Taxi Operations

There was consensus among interviewees that one of the greatest indicators of change within the aviation tourism industry in Talkeetna is the shift from climbers providing a substantial

portion of business for air taxi operators in Talkeetna to tourists taking part in flightseeing or glacier landings tours making up the majority of air services. Whereas the number of climbers to Denali has stayed relatively stagnant since the 1990s, the number of tourists seeking short daytrips has increased substantially (Figure 2-1), representing a clear sign of change in the aviation tourism industry in Talkeetna. Interviewees agreed that package tourism has been driving tourists seeking shorter daytrips into the backcountry of Denali to Talkeetna, leading to rapid increases in the numbers of flightseeing and glacier landing tours taking place year.

Discussing the change in the industry at the end of the 20th century, one interviewee describes:

Things were booming. And clearly, by the end of the 1990s, the climbers were no longer the bread and butter of all these bush pilots because they all got larger planes... [they bought] Otters because the Cessna 185s and even the Beavers weren't big enough. (Interviewee_07, Mountaineer)

These indicators of change are consistent with two previous studies on wilderness experiences in Denali, where mountaineers and return visitors to the south side glaciers identified an increase in air taxi traffic, specifically in the form of glacier-landing tourism (Taff et al., 2015; Watson et al., 2008).

As demand for day trips and scenic flights has grown and technology has progressed, interviewees also identified changes to the type of aircraft flown as being a significant indicator of change within the industry. While most air services had flown Cessna 185s to glaciers in the Alaska Range for much of the 20th century, the 1990s and early 2000s brought a shift toward Beavers and Otters which could accommodate more guests. One local pilot remarks:

Well, when I first started working [at the air service] we had one or two airplanes, like Cessna 185s and the demand obviously was there because we now have six Otters, a Beaver, two helicopters, and a 185. So if the demand wasn't there, we wouldn't be increasing our air fleet. (Interviewee_17)

This shift in aircraft type stood out to local stakeholders as a significant indicator of change for two reasons. First, it indicated the dawn of new technology and the adoption of a new tourism mentality: ‘how can we get the most bodies back into the Alaska Range?’. Second, these new aircraft provide more seats that allowed for a larger stream of tourists coming to Talkeetna each day during the summer season to access the Alaska Range, dramatically affecting the number of tourists the town can accommodate with tourism activities. Interviewees also noted that with the changing aircraft technology came changes in the noise levels of airplanes, with new aircraft technology reportedly quieter than traditional aircraft, potentially helping to reduce noise pollution in Talkeetna and DENA.

4.2.2 Changes in Talkeetna

As the nature of aviation in Talkeetna changed from small-town essential transportation services to large-scale tourism, there were various other changes taking place that have shaped the community of Talkeetna. Interviewees described that tourism has impacted the character of the community in numerous ways: specifically, overcrowding in the summertime and the influx of new businesses and seasonal employees were identified as noteworthy evidence of changes brought on by tourism growth. Moreover, interviewees revealed that a striking shift in the timing and type of tourist or foreigner they would see in their community has changed; whereas the majority of visitors to Talkeetna were once climbers who came during the height of climbing season in the spring, visitors are now observed consistently throughout the summer and are no longer primarily climbers.

Thinking back to... the mid-seventies, late seventies, and eighties, I reflect upon the numbers of people that I would see in the summertime versus now. It is exponential growth. Talkeetna was a sleepy little place that was only frequented by climbers. And when the climbing season ended, the town just sort of dropped off. And that's true today with the tourism industry, where when tourists stop coming, Talkeetna greatly slows down – but I mean that town is clocked with

people throughout much of the summer now, long after the climbing season ends. (Interviewee_07, Mountaineer)

The community was identified as being particularly affected by a shift to industrial tourism facilitated by the package tourism industry. Interviewees identified a loss of traditional community culture, specifically of a “frontier town” toward a gateway community likened to “Disney World” or “a county fair”. A strong contrast was drawn by interviewees between a sleepy town to a bustling tourism hotspot, reflected in the number of visitors and seasonal employees present in Talkeetna each summer.

The impact [of growing tourism] was just huge in many, many ways. It was very good for the economy, for some; for others, it destroyed their paradise lifestyle. Other people who had jobs that had nothing to do with the tourism industry, all of a sudden, their sleepy little town, which they enjoyed, became a hub and became a destination point. Talkeetna, before industrial tourism, wasn't a big destination point and now people are coming here in droves... People opened up every imaginable kind of business to try to take advantage of this revenue stream coming through town. (Interviewee_12, Pilot)

Generally, interviewees described that the changes observed in Talkeetna were vivid and experienced by all community members, not just those directly involved in aviation tourism.

4.2.3 Changes in Wilderness Experiences

In addition to perceived impacts of increased aviation tourism in the community of Talkeetna, interviewees also identified changes arising in DENA and the backcountry of the Alaska Range. For example, as one mountaineer describes:

My first few times on Denali, there were only a handful of people on the mountain and seldom would we see an airplane, other than the airplane that we ourselves rode in to get to the glacier and the airplane that came back to pick us up, and that has changed substantially over the years, mostly with the advent of the package tourism industry. (Interviewee_03)

Generally, interviewees agreed that the backcountry of Denali was becoming busier with increased air traffic, bringing more noise into the wilderness and visual sights of human machinery. Interviewees noted that these changes were being felt by aviators, tourists and climbers accessing the Alaska Range, along with other backcountry users in DENA.

There are a lot of different users out there that just spent two weeks to get into remote Alaska and now they're being buzzed over their head [by aircraft] more than 10 times a day. (Interviewee_21)

Another indicator of change associated with wilderness experiences was the change from multi-day backcountry wilderness users to visitors coming to participate in short, accessible, and safe wilderness experiences. Interviewees noted that while the Alaska Range was once an exclusive destination for skiers and climbers with advanced mountaineering skills, increased aviation tourism in the range has provided increased access to tourists who now require no specialized knowledge of mountain environments.

4.2.4 Climate Change

A final indicator of change frequently referenced by interviewees in the context of aviation tourism was climate change: both global trends and local-scale effects observed in the Alaska Range. Glaciers in Alaska and DENA are widely recognized as being threatened by anthropogenic-induced climate change and were identified as a large indicator of change in the Alaska Range by interviewees:

[The changes] are fairly significant - because in the seventies, when I first started going into Denali, you never saw Meltwater pools. You might see really kind of slushy days down at 7,000 feet at the Kahiltna Glacier, but now at 8,000, 8,500 feet, there are actually large ponds or small lakes in late June, and that didn't use to happen. So that's new, and that's all about climate change changing temperatures. And the temperature changes in Alaska are quite profound over the last 50 years, depending on the region that you're in. (Interviewee_07, Mountaineer)

While many interviewees indicated that the enormous size and high altitude of the glaciers in the Alaska Range sheltered them from some of the more dramatic glacial retreat taking place elsewhere in Alaska, many noted the effects that climate change was having on the seasonality of glacier operations in DENA. Specifically, changes in glacier stability and unpredictable conditions in the Alaska Range were identified by several respondents. One climbing guide describes the conditions at Kahiltna Glacier:

Absolutely, warming and the earlier melt out and the glacial recession and change has had a very significant impact on both climbing activities and flying. In the last few years it was becoming more and more common that the typical landing spot at base camp was unlandable and we actually had to move the landing strip about a mile and a half up glacier to a higher elevation spot that had a little bit more snow. And that was, that was a new thing that had never happened in years past. And then suddenly we just found ourselves having to do that several years in a row to move to the upper landing strip at base camp. (Interviewee_06)

A National Park Service employee echoes these concerns of climate change in the Alaska Range, specifically citing the new, unpredictable conditions on the glaciers.

We used to have more of a stagnant non-dynamic mountain but now we're seeing year to year changes where areas become more prevalent rockfall on a specific year or new crevasses in areas we've never seen them and those changes seem to be happening more regularly than they did in the past. It used to be just kind of the same every year. Now it's more dynamic because of the changes that are happening in the glaciers. (Interviewee_20)

By and large, interviewees agreed that the impacts of climate change were present and prominent in the Alaska Range. Interviews revealed that while glacial changes in the Alaska Range are not blaringly obvious, as has been the case with other retreating glaciers around the world, glacial melt is affecting air taxi and climbing operations in DENA and appears to be getting worse as time goes on.

5. Conclusion

This research explored the development of contemporary flightseeing and glacier landing tourism in Talkeetna and DENA, identifying how local stakeholders describe the history of the industry and perceive indicators of change over time. Results show that commercial aviation tourism has transformed rapidly from a traditional and essential form of transportation throughout the majority of the 20th century toward large-scale tourism in the region today. The historical narrative and indicators of change identified by stakeholders in this research reveal important insights into the development of tourism in the region and help to fill gaps in existing documentation of the historic contexts of aviation tourism, while also contributing to the broader discussion of the need to incorporate historical insights into tourism planning, management, and research.

Results from this research make it clear that both local and global trends have shaped the air taxi and scenic flight tourism industry in Talkeetna and that the dramatic changes in the region are being felt beyond stakeholders immediate to the aviation tourism industry. The intention of this study is not to decide whether these changes are positive or negative; rather, to document stakeholder perspectives of change as groundwork for future investigation into the growth of the industry. The historical narrative presented here can provide important and previously undocumented background information to community planners, park managers, and other decision-makers adjacent to the aviation tourism sector in Talkeetna, thereby offering insight into the development of this dynamic and rapidly growing industry. At the same time, by integrating stakeholder perspectives of history and change, this study captures the narrative arc of change in the industry from those who experienced it firsthand and have valuable local knowledge about historical and ongoing societal processes shaping aviation within DENA.

While traditional models of understanding tourism development in the field of tourism studies provide valuable frameworks for measuring trends, exploring local relationships to tourism development, and analyzing the spatial economics of tourism growth, this study demonstrates the value of moving beyond a prescriptive typology of tourism development as it is predicted to occur. Specifically, this study allowed for a natural description of incremental change at the local scale to reveal important context achieved only by meaningfully incorporating local voices into research processes. By prioritizing qualitative research design and stakeholder perspectives of history and change, this research reinforces the increasingly understood importance of local perspectives for tourism planning, while calling to attention the potential utility of emphasizing historical understandings and contexts as one piece of the broader picture of tourism development (Hanpachern, & Chatkaewnapanon, 2013; Sharpley, 2014). This study has thus also responded to the need for more research on tourism institutions through the lens of history and change over time (Mackenzie et al., 2019; Walton, 2009). Additionally, by collecting oral histories and stakeholder perspectives of change, this study helps to situate the aviation tourism industry in Talkeetna within an increasingly hierarchical tourism system of resorts and transportation networks, contextualizing the dramatic increase in flightseeing observed in recent years and providing a historical foundation on which future research and management decisions can be based (Choe & Schuett, 2020).

6. Implications

The findings from this study have practical implications for future research and management adjacent to aviation tourism in the region. This study provides a critical understanding of stakeholder perspectives of tourism processes and their historical continuities and changes, allowing managers to recommend locally appropriate policy and management recommendations.

Without a critical understanding of historical changes in tourism processes, managers and planners may misunderstand or fail to identify nuanced local socio-cultural circumstances, both elapsed and ongoing, and consequently propose or implement inappropriate policies (Mellon & Bramwell, 2018). Additionally, by allowing stakeholders to identify and describe indicators of change in the region over time, managers and researchers can pinpoint important moments throughout recent decades to examine what historic management practices may have worked and what may require revising.

This study demonstrates that the aviation tourism industry in the Denali region developed out of a number of complex historical events manifesting in the region from the early-20th century through to today. Since aviation arrived in Alaska, its role in Talkeetna has changed and advanced, influenced by community growth and socio-economic development, as well as global forces acting on the tourism industry. The circumstances in Talkeetna described here are reflective of the overall growth in tourism at a global scale and may speak to the broader complicated circumstances faced by park managers seeking to integrate tourism and visitor management within parks and gateway communities. While the results from this case study cannot be generalized beyond the context of DENA, this research continues the important ongoing conversation of the need to meaningfully engage stakeholders in park management and tourism planning while seeking to understand how historic conditions and dynamic local processes are acting upon tourism systems today (Mackenzie & Gannon, 2019; Choe & Schuett, 2020). By documenting locally sourced histories and stakeholder perceptions of change in the aviation tourism industry, this research highlights the value of critically considering social, environmental, and economic transformations at various temporal scales in context, demonstrating the significance for tourism planning and management.

CHAPTER 3

EXPLORING STAKEHOLDER PERSPECTIVES IN PROTECTED AREAS AND GATEWAY COMMUNITIES: A CASE STUDY OF AVIATION TOURISM IN THE DENALI REGION

ABSTRACT

As the primary method of accessing the south side of the Alaska Range, aviation plays a critical role in providing visitor access to some of the most spectacular regions of Denali National Park and Preserve. In recent years, flightseeing and glacier-landing tourism to Denali has grown considerably, bringing with it several benefits, impacts, and challenges being felt within the national park and in the gateway community of Talkeetna, Alaska. Adding to a growing body of research on local perspectives of tourism impacts in protected area settings, this paper seeks to integrate nature-based tourism planning, stakeholder perspectives, and national park management by using Talkeetna and Denali as a case study. Specifically, this research uses qualitative methods to document stakeholder-identified impacts of the growth in aviation tourism and considers local perspectives of tourism planning and management challenges. Results indicate that the impacts of the growth in aviation tourism are being felt both within and outside the boundaries of the national park, demonstrating the need to consider the broader context of the complex tourism system affected by growth in aviation in the region. Findings also reveal that local stakeholders perceive several administrative challenges affecting the ability of the National Park Service to effectively manage impacts of aviation tourism, offering important insight into regional-scale tourism administration and potential future park management decisions.

Introduction

In the United States, as with many nations around the world, parks and protected areas play an integral role in sustainable nature-based tourism, providing long-term protection of natural landscapes and safeguarding tourism resources including scenic beauty, healthy wildlife populations, and natural sounds (Bushell & Eagles, 2006; Leung et al. 2018). As the global demand for nature-based tourism grows, protected areas, and the local communities acting as gateways into these landscapes, are increasingly being sought out by tourists as some of the most popular attractions in the United States. Protected areas and the tourism they generate have thus become topics of major social, economic, and environmental importance (Kuenzi & McNeely, 2008; UNWTO & UNDP, 2017). National parks specifically account for a sizeable portion of nature-based tourism in the U.S., collectively receiving over 327.5 million visitors in 2019 and driving significant growth in commercial tourism and small-business development in local communities adjacent to parks (Cullinane Thomas & Koontz, 2020). National parks and the gateway communities that host park visitors are, in turn, strongly affected by nature-based tourism in both positive and negative ways. For decades, it has been noted that the ecological and experiential conditions in and surrounding national parks may be degraded or threatened by overtourism (Dunning, 2005; Fredman, 2004; Stoker et al., 2020), while national parks also provide important economic stimulation and protect valuable scenery for local communities (Frauman & Banks, 2011; Howe et al., 1997). At the same time, national parks are becoming increasingly reliant on tourism revenue from visitors to justify their existence and drive support for the resources necessary for the National Park Service (NPS) to deliver on its mandate (Boyd, 2006; Eagles, 2014). The complex nature of tourism in protected areas therefore requires informed management and planning processes that work toward sustainable tourism

development and include voices from various stakeholder groups beyond protected areas managers (McCool, 2009).

The need to engage local communities in protected areas management is increasingly recognized as an important component of conservation of natural resources and is understood to be critical to successful management of tourism within parks (Haukeland, 2011; Wilson et al., 2018). Given the unique nature of tourism in each national park across the U.S. and the world, there appears to be no one-size-fits-all approach for sustainably managing tourism in protected areas; instead, local social, environmental, and political contexts must shape management styles (Imran et al., 2014; Poudel et al., 2016). As many scholars have noted, the outcomes of management in protected areas depend strongly on the nature of tourism within each case, along with the unique social characteristics of the park and surrounding region (Butler & Boyd, 2000). Case studies examining commercial tourism industries or ventures operating within and around national parks are therefore critical representations not only of specific cases of tourism development in parks, but of opportunities to understand best management practices to protect parks and support gateway communities that host these tourism enterprises and visitors to the region. Specifically, local stakeholder perspectives, attitudes, and opinions regarding tourism and protected areas are critical to inform sustainable management of rising visitation to national parks (Eagles & McCool, 2002).

As a contribution to the growing body of sustainable tourism research considering stakeholder understandings of tourism impacts in parks, this paper explores the complexities arising within Denali National Park and Preserve (DNA) and the gateway community of Talkeetna, AK, specifically concerning the growing flightseeing and glacier landing tourism industry. Given the dramatic nature of changes taking place in the aviation tourism industry in

DENA and ongoing management planning processes to address impacts of aviation within the park, it is timely to examine the experiences of local tourism stakeholders and to document their perspectives of tourism growth and impacts (NPS, 2006). To do so, this paper will address the following research questions: R1) How do stakeholders describe the impacts of growth in aviation tourism in the Alaska Range and the gateway community of Talkeetna? and R2) What do stakeholders perceive to be the most important challenges in sustainably managing aviation tourism growth in Denali National Park and Preserve?

Literature Review

The rapid growth of tourism and tourist demand for immersive nature experiences is greatly affecting visitation to national parks and protected areas around the world (McCool & Eagles, 2002). Indeed, several international studies indicate that the term ‘national park’ has a significant influence on the appeal of a destination for both domestic visitors and foreign tourists, and that national park visitation continues to grow steadily (Eagles et al., 2002; Fredman, 2004). As nature-based tourism grows though, national parks in the United States, as with many jurisdictions, are challenged with finding a balance between two often competing goals: preserving natural resources and providing access to visitors (Butler & Boyd, 2000; Eagles & McCool, 2002; Jones et al., 2017). This dual mandate of the NPS becomes especially challenging when considering the development of tourism products and enterprises in protected areas, as increased tourism often brings unwanted and unintended consequences to the natural environment, as well as to local gateway communities (Ferreira, & Harmse, 2014; Howe et al., 1997; McCool, 2009).

As the challenges of balancing competing interests in nature-based tourism and national park management become more pronounced, sustainable tourism development has gained momentum

in theory and practice in the context of protected areas (Dangi & Gribb, 2018). The term *sustainable development* was first coined in the Brundtland Report, which called for development “that meets the needs of the present without compromising the ability of future generations to meet their own needs” (WCED, 1987, p. 43). Not long after the concept of sustainability took hold throughout the world, sustainable tourism arose as a highly sought-after standard of tourism success whose theoretical, practical, and philosophical underpinnings have been explored extensively in academia (Bramwell & Lane, 2011; Butler, 1999; Ruhanen et al., 2015; Sharpley, 2000). Specifically, sustainable tourism considers the environmental, economic, and socio-cultural aspects of tourism development (Figure 3-1) and seeks to balance these three dimensions within an entire tourism system to guarantee its long-term sustainability (UNWTO & UNDP, 2017). Over the years, concern for sustainable tourism development has arisen from the growing realization that uncontrolled growth in the tourism sector may have significant negative social, economic, and environmental impacts at a local and global scale and has been posited to be especially important in the context of nature-based tourism and protected areas (Eagles & McCool, 2002; Roe et al., 1997).

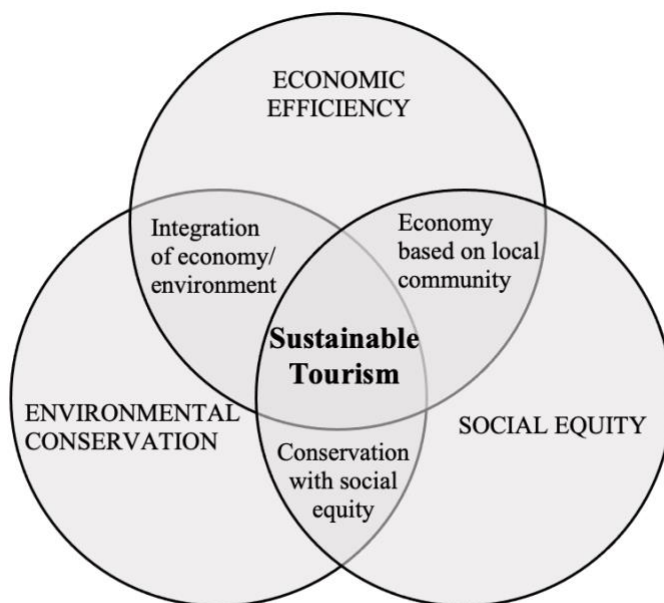


Figure 3-1: A general model for sustainable tourism. Adapted from Sanagustín Fons & Fierro (2011)

In the 21st century, sustainable tourism research has moved from seeking to define and establish the theoretical concepts of sustainable tourism toward holistically considering practical applications of sustainable development principles. This evolution in the field has come, in turn, with the recognition of complex intersections of the socio-cultural, economic, environmental, and political characteristics of tourism (Bramwell & Lane, 2011; Ruhanen et al., 2015). Instrumental to the shift in thinking on sustainable tourism development was Inskip's contribution in 1991, arguing that sustainable tourism planning should happen as an integrated system with a focus on long-term community involvement in planning and development processes (Inskip, 1991). With researchers' and managers' understandings of sustainable tourism within park settings maturing, the acknowledgement of the central role of local stakeholders in tourism planning is now considered a critical piece of successful protected areas management. As Eagles & McCool (2002) describe: "Planning for tourism in parks and protected areas cannot be conducted in isolation of local communities located in or adjacent to those areas. The linkages between parks and communities are simply too strong to ignore in such planning" (p. 94). Indeed, authors and park practitioners are increasingly recognizing that tourism in parks is a dynamic phenomenon constantly experiencing new challenges, and that local contexts are critical to the success of predicting, responding to, and managing challenges as they arise (Byrd, 2007). A strong understanding of local perceptions of tourism impacts from stakeholders therefore holds the potential to inform the ongoing debate on how best to develop and manage tourism in parks.

Despite the recognition of the complex and important interrelationship between protected areas, gateway communities, and tourism, there has long been a divide in the way researchers and managers approach the study and administration of tourism in national parks. In North

America specifically, there is a tendency to focus on outdoor recreation planning in place of tourism planning in national park research and management (Blahna et al., 2020). While the two planning styles share similarities, there are important distinctions with real management implications. Whereas outdoor recreation focuses on leisure experiences and recreation in outdoor settings, nature-based tourism is a broader concept that emphasizes the connections and market interactions among various actors involved in the delivery of tourism services, products, and experiences (Cervený et al., 2020). In the context of national parks, classic outdoor recreation management is hyper-localized and focuses on visitor experiences immediate to the national park and directly influenced by NPS policies and structures (Leung et al., 2018). Meanwhile, nature-based tourism management in park settings considers the regional, national, and international contexts of tourism in and surrounding a national park, situating visitors in the broader systems within which they are traveling (Eagles & McCool, 2002; Puhakka & Saarinen, 2013). It has therefore been posited that by focusing national park research and management on outdoor recreation as opposed to considering broader tourism systems, park managers may be overlooking important conditions and prospects for more proactive and informed land management and sustainable tourism development (Cervený et al., 2020).

While there has been important literature broadly connecting national park and tourism management published in the 21st century, much of the case-study based research with specific park management implications has remained either focused on outdoor recreation within parks or about tourism planning adjacent to parks (Eagles & McCool, 2002; Haukeland, 2011). Accordingly, there has been an increasing call for better integration of tourism planning and park planning, inclusion of tourism operators in national park management, and for national park managers to embrace their role as tourism providers in ways that will result in better regional

economic, environmental, and social outcomes (Cervený, 2020; Leung et al., 2018). Responding to this call, this study uses the case of Talkeetna and Denali National Park and Preserve to better understand stakeholder experiences of aviation tourism impacts within a national park and its gateway community, increasing our understanding of how stakeholders perceive management challenges for sustainable tourism development within the park.

Setting: Talkeetna, AK and Denali National Park and Preserve

Alaska's national parks stand as strong examples of the immense growth in nature-based tourism and protected areas visitation throughout the last 40 years. The most visited national park in Alaska, Denali National Park and Preserve, has seen a steady increase in visitation from just over 200,000 visitors in 1980 to over 600,000 in 2019 (NPS, 2020a). Attracted to the state by its scenery, wildlife, glaciers, and other natural attributes, tourists to Alaska are often motivated to visit national parks, and the Denali region has long stood as an important attraction for visitors to Alaska as it contains one of the largest uninterrupted wilderness landscapes in the country (Cervený, 2008; Fix et al., 2013; NPS, 2006).

The large increase in nature-based tourism in the Denali region has driven widespread economic stimulation in surrounding communities: according to a NPS report by Cullinane Thomas & Koontz (2020), in 2019, visitors to DENA spent an estimated \$613 million in local gateway communities, supporting over 7,490 jobs, \$288 million in labor income, and \$874 million in economic output in local gateway communities surrounding the national park. As visitation to DENA has increased, the scope of the aviation tourism and air-taxi industry in the region has likewise grown and changed considerably. Once serving primarily mountaineers, hunters, fishers, and private landowners in the Denali region, aviation operators have shifted their focus to provide day-use visitors unique tourism experiences, primarily in the form of

scenic flights in the national park (Watson et al., 2008). With aviation tourism continuing to grow, NPS staff, visitors to these backcountry areas, and other stakeholders have expressed concerns about the implications of this growth for safety, quality of visitor experiences, and aircraft impacts to natural sounds and wilderness experiences (NPS 2006).

The small community of Talkeetna, AK is the hub for aviation tourism in the Denali region and is home to the majority of concession-holding air-taxi operators permitted to land within the boundaries of DENA. The community acts as a unique gateway to the national park; despite being several hours' drive from the official national park entrance, Talkeetna serves as the entrance to the south side of the park, where park visitation is facilitated through aircraft. Approximately 90% of access to the glacier landing portals in the Alaska Range originates from the Talkeetna Airport (Watson et al., 2008), making community residents important stakeholders in not only the aviation tourism industry in DENA, but also in park management decisions regarding the backcountry glacier portals.

Methods

Case study research design and qualitative methods were chosen for this study as qualitative research can provide important insight into real-world phenomena and offer rich local understandings of complex issues (Patton, 2002; Rubin and Rubin, 2005; Zegre et al., 2012). In order to give voice to stakeholders and derive results grounded in local perspectives and experiences, I used in-depth semi-structured interviews with stakeholders as the primary source of data for this project (Rubin & Rubin, 2005; Wilson et al., 2018). In this study, stakeholders are understood to be residents of Talkeetna or individuals with a detailed familiarity and interest in the aviation tourism industry, the glacier landing portals in DENA, or the tourism industry in Talkeetna. Purposive and snowball sampling were used to select respondents for this study to

ensure that individuals interviewed encompassed various relevant stakeholder attributes in the region (Bennett & Elman, 2006). Purposive sampling, a method in which individuals that are especially knowledgeable about or experienced with a subject are identified as respondents, is a technique widely used in qualitative research for the selection of information-rich cases, allowing for the most effective use of limited resources (Creswell, 2014; Patton, 2002). Snowball sampling, meanwhile, is a technique in which informants identify additional potential interviewees, allowing for well-rounded representation of community stakeholders while leaving flexibility to uncover additional information and perspectives throughout the research (Creswell, 2014).

Interviewee	STAKEHOLDER ATTRIBUTES			
	NPS	Mountaineering Community	Talkeetna Community	Aviation Tourism Industry
01	X	X		
02				X
03		X	X	X
04			X	X
05			X	
06		X		
07		X		
08		X	X	X
09			X	X
10				X
11			X	X
12			X	X
13	X		X	
14		X	X	X
15	X			
16	X			
17		X	X	X
18	X		X	
19			X	
20	X	X	X	
21				X
22	X			

Table 3-1: Stakeholder attributes of qualitative interviewees

When conducting semi-structured interviews, I drew questions from an interview guide developed for this study (Appendix) that ensured all interviews were linked to my research questions while also providing opportunities to deviate from the interview instrument to accommodate different stakeholder attributes and areas of expertise (Bennett & Elman, 2006). In

total, I conducted 22 interviews with stakeholders from across the aviation tourism industry in Talkeetna (Table 3-1). Interviews were generally in-depth, lasting more than 40-minutes each (Creswell, 2014) and were conducted over the telephone to comply with COVID-19 remote research requirements. Interviews were audio recorded and transcribed using an online transcription software, then cleaned and checked for accuracy during the first cycle of coding. Using research questions as the basis for my analytical framework, data analysis was comprised of several coding cycles supplemented by evidence derived from document analysis (Creswell, 2014). Using in vivo coding as an initial coding method allowed me to become acquainted with participant perspectives and actions, using language from the participants themselves to build codes during first-cycle coding (Saldaña, 2016). I then used thematic analysis as a method to identify and organize relevant themes and subthemes, which make up the units of analysis for this research. In subsequent re-readings of the transcripts, I became increasingly familiar with the data and could explore meanings associated with emerging themes from the interviews. I then cross-referenced interview results with other sources including historical documents, library archives, and public media for validation (Bowen, 2009).

Results

Thematic analysis of semi-structured interviews revealed important stakeholder perspectives of impacts in and around DENA, especially pertaining to the economic, socio-cultural, and environmental sustainability of growth in the aviation tourism industry. These impacts are characterized by the themes presented in Table 3-2. Stakeholders expressed various concerns about the effects that the growth in aviation tourism was having in both Talkeetna and in the backcountry of DENA, but also identified numerous important aspects of the industry for the cultural and economic well-being of the community. The following section explores the ways in

which stakeholders constructed and described the impacts of aviation tourism in the Denali region, as well as what they perceive to be the barriers and challenges to management of the

Category	Theme	Sub-themes
Impacts	Noise	Noise in Talkeetna
		Noise in DENA
	Over-crowding	Crowding in the air and on the South Side glaciers
		Congestion in Talkeetna
		Pressure on community infrastructure
	Conflict and Disagreement	Disagreement between Talkeetna residents
		Competition between aviation operations
		Conflict between recreationists
	Economic Conditions	Economic growth in Talkeetna
		Increased cost to operate Air Services
		Increased reliance on Package Tourism

industry into the future.

Table 3-2: Emerging themes and subthemes of the impacts of aviation tourism growth in Talkeetna and DENA

R1: Impacts of growth in aviation tourism

Noise

One of the most common impacts identified by local stakeholders was the noise generated from the growth in aviation tourism in the Denali region. Many stakeholders expressed that noise was an impact that has become more acute in recent years, both in the community of Talkeetna and in the national park. Generally, interviewees agreed that DENA is becoming louder due to an increase in flightseeing and glacier landing tourism, and that this noise is problematic for various users in the Alaska Range. As one Denali climbing guide describes:

The noise could be anything from this distant hum, almost imperceptible, to being very, very loud. Some of these valleys are very narrow with big cliffs that go up right off the glacier ice with lots of little cul-de-sacs along the glacier, and as this airplane flies along these cliffs, the noise can reverberate off of them and as it passes by each little cul-de-sac, the pitch of the sound goes up and down. It can be really, really loud - loud enough that you cannot converse to a person that's more than 20 feet from you. (Interviewee_21)

When discussing aircraft noise, interviewees repeatedly referenced how loud the aircraft are at close range and how frequently they fly overhead. Noting that many park users in the Alaska Range are seeking wilderness experiences or escape from the noise of everyday life, some interviewees indicated that they found the interruption of anthropogenic noise in such an immense wilderness environment to be jarring and inappropriate. Another climbing guide shares that: “The biggest impact [of aviation] is the annoyance of noise. You're going to these very remote pristine areas, but the soundscape is not pristine. The soundscape is very much impacted by the noise of machinery.” (Interviewee_03)

Many interviewees associated with the mountaineering community were particularly worried about the impact of increased noise in DENA, noting that over the course of two decades, aircraft noise had increased exponentially, to the point where it has become “impossible to escape” (Interviewee_20). In addition to the potential effects of noise on climbers on the south side of the Alaska Range, several stakeholders indicated that noise is affecting other visitors to DENA, regardless of whether or not they are recreating near the glacier landing portals. Specifically, many interviewees mentioned that backcountry hikers accessing remote parts of DENA from the Denali Park Road are also being impacted by aviation noise from aircraft flying overhead to reach the south side glaciers. One climbing guide expresses that “If you're hiking the backcountry of Denali, it's probably going to be noisier than hiking in any national park in the lower 48.” (Interviewee_03)

Beyond the impact of noise in the Alaska Range, most interviewees held a further concern of the impact of noise within the community of Talkeetna, largely related to scenic flights bound for the national park. Recalling neighbors who expressed concern about the noise in town, a longtime resident of Talkeetna describes the noise conditions in Talkeetna around the year 2010:

The number of flights was really affecting people who lived on the ground and had constant air traffic over their house. Constant. They didn't have any peace all day long, but you know... They were close to the airport and there was just no way for the traffic to go far enough away from them because all the traffic was coming and going to the airport, so it just put them right at ground zero. (Interviewee_13)

According to many interviewees, the noise has only increased in the last decade. For a number of respondents, the unusual decrease in aviation tourism activity in the Denali region in 2020 due to the COVID-19 pandemic provided an important comparison of loud aviation had become in Talkeetna in recent years. A Talkeetna resident and climber explains:

I think that until you get a year like we have this year where [airplane noise] is actually absent, you don't really recognize the impact that it has. Even in town here, outside the park, you can hear the birds again - and on a general day in a tourism-filled summer, there are constant flights out of the airport. It just doesn't stop from 8:30 in the morning until 9:30 at night. It's just part of the town. And so in town, the noise level I think is the biggest impact. (Interviewee_20)

While most interviewees were quick to reference the noise impact that growth in aviation tourism has had, some interviewees claim that noise is an inherent part of life in Talkeetna and for some, is an important cultural component of the community:

Talkeetna is the noisiest little town. You can imagine, between the airplanes flying over, the jet boats, the train coming through... It's just all part of the charm, I guess, of our town. You even see that bumper sticker around that says, 'I love airplane noise' - there's a lot of that here. (Interviewee_19, Talkeetna resident)

While interviewees generally agreed that growth in the aviation tourism industry has led to an increase in noise in both DENA and Talkeetna, several respondents made a point of noting the potential influence of changing technology on noise levels, while acknowledging that the quieter

aircraft have not completely solved the noise problem. One longtime resident of Talkeetna and member of the mountaineering community compares new aircraft technology to the traditional small planes used in the aviation tourism industry: “The airplanes being used more and more today are quieter than many of the planes that were used just a decade ago because of the type of engines and the propellers. They've made them quieter, but they haven't made them silent” (Interviewee_03).

Overall, stakeholders were quick to identify and acknowledge the noise impacts of the aviation tourism industry in the region, although some stakeholders, specifically those from the climbing community and the national parks service, described it as a more serious impact than those working in the aviation tourism industry. One pilot who has worked in scenic air tourism describes two differing perspectives on aircraft noise, summarizing some of the conflicting views that emerged in interviews:

[Airplane noise] is a bit of a contentious issue. I want to say that Talkeetna is the third or fourth busiest airport in Alaska, which is crazy to think because of the scale of the town – it's just not a big place, but it is very much a hub of aviation activity. Personally, that's never something that has bothered me because I have a strong, personal connection to the aviation world. When I hear the sound of small airplanes flying over it's a reminder of a lot of really, really incredible experiences in my life. For some people that maybe don't have that connection, very loud, very intrusive sound of airplanes flying over all day every day for most of the summer can get pretty annoying, or at least people describe it as very annoying. (Interviewee_06)

Over-crowding

Interviewees also identified a range of impacts relating to overcrowding and congestion resulting from increased tourism in the region. In DENA, interviewees specifically identified increased congestion in air space and more visitors on glaciers in the Alaska Range as impacts of aviation tourism growth. Whereas 20 years ago you may not have encountered another airplane in the Alaska range, today “it's very common when you fly in to begin a climb, or on a

flightseeing trip, to see multiple airplanes coming and going and parked on the glacier while you're there” (Interviewee_03, Mountaineer). However, most interviewees agreed that overcrowding is an indication that more tourists have the unique opportunity to experience the backcountry of Denali, which was generally understood to be a benefit of the growth in the industry. Despite knowing that recreationists and tourists are more likely to encounter other visitors on the glaciers today, the general sentiment among stakeholders is that it does not affect visitor satisfaction with their glacier landing excursion. As one pilot describes:

I think that most people have don't really know what to expect and so whatever they get, they pretty much just accept it... The amount of people on the glacier, there's no way to predict it that and you could be all alone, which is a cool experience. Or you can be there with a bunch of other planes. It doesn't seem like it detracts from the experience. (Interviewee_10)

Meanwhile, stakeholders consistently agreed that crowding in Talkeetna has become a critical issue, with overcrowding being an obvious impact of increased tourism in the region. When describing the growth of visitation in Talkeetna, many interviewees noted the pressure that increased tourism is causing on town infrastructure including water, sewage, and traffic systems: “When tourism is at its max, I think everybody would say that where we're over capacity for what on the infrastructure of the town can actually take.” (Interviewee_20) Describing the hectic conditions in Talkeetna at the peak of a tourism season, many stakeholders described the main street in Talkeetna as being “comparable to Disney World”, “carnival-like” or “completely overwhelming”. For example, one community resident in Talkeetna describes that;

If you asked a lot of long-time residents about tourism, the answer would be that there is definitely too much. There's too much tourism. A lot of locals don't even come downtown in the summer, it's that busy. And we have a shortage of infrastructure to handle more tourism - bathrooms, trash, parking. (Interviewee_19)

One pilot echoes these concerns, noting that “A lot of people came here for the quiet, small town life and now it can be crazy on a weekend afternoon in July, down on the main streets.”

(Interviewee_10) Here again, many stakeholders took note of the alleviated pressure seen in Talkeetna during the 2020 tourism season given the decrease in international tourism due to the COVID-19 pandemic. As one Talkeetna resident and NPS employee explains:

This year it's been pretty much local tourism and small group tourism, which is to me a more sustainable model. You know, people aren't making money hand over fist, but the bathrooms aren't overwhelmed, the [national] park's not overwhelmed. You can drive down the street. Like all those things that we love about our small town are back and prevalent. (Interviewee_20)

The general sentiment that emerged from interviews regarding crowding is that there are both costs and benefits associated with a growth in tourism in Talkeetna and that overcrowding is one consequence being strongly felt at a local scale. One pilot commented on the tradeoffs that come with growth in the industry:

Seasonally, tourism is both a blessing and a curse. Everybody complains about how busy it is and how hard it is to get around and some of the insensitive activities that take place there from people that are from out of town – but at the same time, the community is entirely dependent on tourism for their jobs and for their local economy. And so people complain about it a lot, but also love and need the revenue and the business. (Interviewee_06)

Conflict and Disagreement

A number of conflicts and disagreements were believed to be directly affected by the growth in aviation tourism in Talkeetna and DENA, including conflict between mountaineers and flightseeing operations, concession air taxi operators and the NPS, and between community members in Talkeetna. Interviewees generally agreed that tensions had risen over the last decade as the tourism industry has expanded, and that conflicts have arisen within various facets of the industry. For example, one NPS employee describes pushback from the aviation community about overflight best practices within

the park: “[Management] is a very contentious issue. People are very, very sensitive to the idea of regulation and being regulated, being controlled and constrained.”

(Interviewee_15) Another community member who participated in a joint overflight advisory council describes the challenges of coming to an agreement among various stakeholders:

“I was on the Denali National Park overflights advisory board for many, many years and the board consisted of people from across the spectrum, from military aviation, commercial aviation, civil aviation, to environmental groups, to the climbing community, to people who own remote land and had a cabin in a remote area. We had many interesting meetings, some very good conversations, but we accomplished little - because everything was so controversial... we tried to resolve so many different issues and never could because of the controversies that just had seemingly no good answer... It was just impossible. We never, ever got anywhere. Nothing ever came out of it.” (Interviewee_03)

While frustration related to the difficulty of coming to agreements was shared by many interviewees, there were others who were cautiously optimistic about the progress that has been made with voluntary measures as the NPS has sought to limit the impact of airplane noise in the national park. Specifically, several stakeholders mentioned the success of voluntary flight measures to fly higher over certain corridors within the park and to keep a further distance from summit of Denali with aircraft. One pilot and concession-holding air taxi operator describes:

As concessionaires, [the NPS] kind of has a rope around our neck a little bit because they control our concession, they control us. And we amicably work with the park to fly higher in certain areas... But we have to look at the longevity, you know, it's a tough business. We don't want to get sideways with park service, and we want to cooperate. And so you know, there's been a lot of proactive work together with the park service - it's all about preservation conservation. (Interviewee_11)

Another source of conflict identified by some interviewees was the conflicting interactions between mountaineers and flightseeing tourists. Several interviewees indicated that some mountaineers had become frustrated by the incessant aircraft noise overhead, while others felt

that tourists “bombard the climbers” both in the Alaska Range and in Talkeetna: “The mountaineers were becoming the side show for the people who were sitting in the plane. And so a lot of frustration and hostility started occurring.” (Interviewee_13, NPS employee) Another former NPS staff member and mountaineer describes:

Tourists love to get pictures of [the climbers]. It’s part of the experience, like, one is landing on the glacier and the other is seeing a climber...It’s like if you were a kid and all of a sudden there was Mickey Mouse walking down the street - that's exactly what these tourists feel like if they realize that there’s a real climber and they've been on Denali, whether they summited or not, they're just so fascinated with that. They just come onto that poor person or that group of people. They want to get pictures with them and they want to, you know ... ‘Can we email you’ or ‘can we’... it's like, God, it's unbelievable. I mean, these climbers, a lot of them think it's funny, but some of them are so put off by it. It wasn't that way years ago, I mean there were just a few tourists around. (Interviewee_01)

This feeling of conflict and disagreement among various parties was echoed across stakeholders and ranged from clashes within the community of Talkeetna to the backcountry of DENA. Generally, interviewees agreed that as tourism and visitation has grown, disagreements have become more contentious.

Changing Economic Conditions

A final impact of the growth of aviation tourism frequently reported by stakeholders was the changing economic circumstances within Talkeetna and the aviation tourism industry. Stakeholders generally agreed that aviation tourism has been a positive driving force in bolstering the economy in Talkeetna. Interviewees identified the growth in popularity of aviation tourism as an important driver of revenue for the community, frequently mentioning that the flightseeing and glacier landing tourism has “trickled down” to support other economic activities in the community. One long-time resident describes the changes they have seen in town, attributing much of it to increased tourism:

The growth in flightseeing has just been skyrocketing until this year and everything else in town benefits from that, including the river trips, the eating establishments, we now have a grocery store that the year-round residents in Talkeetna have benefited from. It used to be a pretty seasonal town with very few people living here year-round... Within 10 year's time, we have a grocery store, we have a medical clinic, a year-round population in Talkeetna has established itself at the highest levels it's probably ever been. And that's all directly tied into the vacation draw for flightseeing. (Interviewee_20)

At the same time, there were several unforeseen economic impacts of the growth in flightseeing and glacier landings identified by stakeholders, especially the cost of operating air services today. Several pilots and aviation tourism operators identified dramatic increases in insurance costs to operate air taxis and noted that the costs associated with purchasing and operating new aircraft were significantly higher today than in decades passed. At the same time, several stakeholders expressed concerns about the rate and trajectory of growth in the aviation tourism industry, claiming that the economic conditions of the industry are quickly outgrowing the capacity of both the town and the national park, and that an incessant drive for growth in the industry may be hurting the community. One operator expresses their views on the matter: "I would say it's been 10 years of over the top and we can't handle it with the infrastructure, but it won't stop because there's too much money involved." (Interviewee_12) Another community member in Talkeetna and mountaineering professional explains that:

Now it's big business. [The air taxi operators] have more airplanes, more pilots, more infrastructure, and they are not going to want to reduce their flights, and economically, they can't reduce their flights. They've got too much invested now. (Interviewee_03)

The notion that significant financial capital has been invested into the aviation tourism industry was echoed by numerous stakeholders who expressed support for the industry given it has driven widespread development in Talkeetna, but also concern over the rate of growth and the dependence of the town on tourism. Several stakeholders expressed that there is mounting

economic pressure to continue growing at what many considered to be “an unsustainable rate” due to the amount of money that has already been invested into the industry. Other community members expressed concerns that the financial benefits of tourism have started to leave the local community with the rise of the package tourism industry: “Outside businesses are coming in to make money, and it isn’t necessarily all staying here within the local community”

(Interviewee_20, Talkeetna resident). Specifically, some community stakeholders referenced situations in which large cruise companies provide exclusive accommodation, transportation, and activities, leaving less opportunity for tourist spending to support the local economy.

Stakeholders generally held this concern as a sense of apprehension as to whether the town is becoming too singularly dependent on tourism. One Talkeetna resident describes:

I think Alaska in general is dependent, unfortunately, largely on that global tourism economy. And I know the state is probably, and hopefully looking seriously at a sustainable economy... There was a lot of warning signs, I think, from people about becoming too dependent on it. I think [COVID-19] will wake up a lot of folks. (Interviewee_20)

R2: Challenges of sustainably managing aviation tourism growth

The general consensus among interviewees was that increasing aviation tourism has become a significant trend for both Talkeetna and DENA and that there are clear costs and benefits to growth in the industry. Stakeholders frequently spoke of the need for “balance” within the management of aviation tourism, at the industry, community, and NPS levels of influence.

It's definitely a controversial issue. Every activity has its downside. It's detrimental impacts to the on the ground user. In this case, it can provide, of course, the wonderful opportunity to see the country from the air. It can also provide a great experience to be on the ground for a very short period or a very long period, depending on whether you're on a day trip or being dropped off for a month at a time. But each flight definitely has its impact. (Interviewee_03, Mountaineer and Talkeetna resident)

When considering park management implications of the scenic flight and glacier landing tourism, stakeholders repeatedly commented on the inability of the NPS to regulate airspace. Specifically, interviewees frequently mentioned that while the NPS could impose limits or regulations on glacier landings within DENA, these regulations would do little to address any of the aforementioned impacts of the increase in aviation tourism – especially noise. Many stakeholders made a point of noting that while the vast majority of glacier landings within DENA originate from Talkeetna, there are various flightseeing companies operating from other communities surrounding the park and even coming from as far as Anchorage or Fairbanks, and that these flightseeing tours were also contributing to the noise levels in the park but could not be regulated at the park level. One Talkeetna resident and NPS employee explains their perspective on the complicated nature of NPS management and authority over the airspace:

The airspace is FAA regulated, it's not park regulated. So I think the actual reality of being able to manage that as is nearly impossible, but I think that people in general, myself included, are recognizing this year that it's notably quieter and more sustainable -- now versus how it is when everything's going gangbuster in the summer...[The NPS has] authority to restrict glacial landings but I don't think that that's going to have a huge impact on flightseeing, so that might reduce air traffic a teeny bit, but I think people would just adjust and go fly instead of land [on the glaciers]. So, while I would like to see less noise pollution in this general area, the reality of that is it's a pretty difficult thing to do. (Interviewee_20)

Despite the commonly expressed reservations about the ability of the NPS to control aviation tourism impacts, interviewees repeatedly emphasized the need for cooperation among various groups within the community to find solutions to the complex issues and circumstances arising from rapidly growing tourism, noting that it would take input and cooperation from everyone to achieve success. For most stakeholders, success was described as a form of sustainable tourism achievable through compromise amongst conflicting goals.

The only way things work is when we sit down, we work together and we come to find the common goals we want, and we all love this park. We all want to see it

survive. We all want to see the environment do well. We all want clean air. Yeah. We'd like it to be quiet and pristine, but we also know that the only way to really access this park is by aircraft you know, for either mountain climbing or just [for flightseeing] but there is a balance. (Interviewee_21, Pilot)

While the NPS is only one of many stakeholders in aviation tourism operations in DENA, most interviewees agreed that the agency has an important role to play in the aviation tourism industry, alongside other actors, especially the air taxi tourism operators themselves.

Well, I certainly hope that the agencies can get together and manage it before it becomes any bigger of a problem. I mean, in this case, we are dealing with a national park and the national parks have always had a difficult mandate in protecting the environment and then making it available to the public but to do so, they need to manage it and they need to get ahead of the curve and try to figure out how they're going to manage it into the future... I think the [NPS] really needs to figure it out before it becomes a major problem. (Interviewee_03, Mountaineer and Talkeetna resident)

When considering the challenges of managing the growth of aviation tourism, stakeholders identified numerous predicted limits to growth, often speaking of “stagnation” or a “forced slow down” of growth in the industry. The most commonly reported predicted limit to growth was visitor thresholds in both in Talkeetna and the backcountry of DENA, with many stakeholders describing a potential “carrying capacity” on the glaciers and in Talkeetna.

Several stakeholders also expressed feelings of needing to “get ahead of the curve” and to encourage collective management across various stakeholder groups now before the industry is pushed beyond its limits:

“... because it's very hard to go backwards. You know, let's say that we were just talking about 50 flights a day – it's very hard to move the dial back. It's much easier to keep the dial for moving forward with regulations but there's going to be the pushback to move it back to say, 35 flights a day... all hell would break loose. The industry just wouldn't accept it, for good reason, because they've already bought the equipment and put in the infrastructure to support [the higher numbers]. (Interviewee_03, Mountaineer and Talkeetna resident)

Ultimately, stakeholders tended to agree that there is a balance to be struck and that open and transparent communication amongst the various actors in the industry is required to sustain the success of aviation tourism and visitor conditions within DENA. As one local tourism stakeholder expresses:

It's so nice to see folks get to experience [these glaciers] and I hope it can continue in an acceptable way. I guess I used the word balance a lot in this conversation, but it's up to everybody to work together to figure out that balance, you know, the park service, air taxi companies, the visitors themselves. It has to be sustainable. (Interviewee_19)

Discussion & Conclusion

As the primary method of accessing the south side of the Alaska Range, aviation plays a critical role in providing visitor access to some of the most spectacular regions of DENA; however, rapid growth in the aviation tourism industry comes with various impacts and compromises in the Denali region. This study helps to contextualize and document these impacts by exploring what stakeholders perceive to be the effects of aviation tourism growth in the region, considering the unique contexts in both the gateway community of Talkeetna and within the jurisdiction of DENA. Furthermore, this research responds to the call for better integration of tourism planning, park planning, and inclusion of local stakeholders in national park management by documenting stakeholder perspectives of management challenges for sustainable development within the aviation tourism industry.

The first research question addressed in this study sought to explore what stakeholders describe to be the impacts of the growth in aviation tourism in the Alaska Range and the gateway community of Talkeetna. Results indicate that noise, overcrowding, conflict and disagreement, and economic conditions were the most frequently identified impacts and are some of the most significant effects of tourism growth in the region. These impacts of aviation tourism have been

documented elsewhere to various degrees (Kedrowski, 2009; Miller, 1999; Norris, 2009; Taff et al., 2015; Christensen et al., 2005; Withers & Adema, 2010) and by gathering them from stakeholders here, this study equips local agencies and managers with insight into perceived positive and negative effects of tourism growth that can be used to inform potential management of commercial activities in the Alaska Range. For example, aircraft noise was identified as an impact with negative consequences in both the glacier landing portals and within the community of Talkeetna, particularly for visitors seeking wilderness experiences and for local community members living close to the airport. Interestingly, interviewees indicated that they did not associate increased noise from aircraft with decreased visitor experiences for day-users partaking in glacier landing tours, which is consistent with previous findings on visitor experiences in the Alaska Range (Christensen et al., 2005). These results are also supported by previous findings reporting that Denali mountaineers' perceptions regarding aircraft sounds were generally positive (Taff et al., 2015). Consequently, additional empirical research into various stakeholder perceptions of soundscape conditions in the Alaska Range and within Talkeetna (e.g., from tourists in Talkeetna, local residents, and other wilderness user groups in the Alaska Range) may provide valuable information for potential future management of flightseeing and glacier landing tourism.

Crowding and congestion were also identified as important impacts of the increase in tourism in the region in both Talkeetna and in the national park. Specifically, stakeholders indicated that increased tourism in Talkeetna and subsequent pressure on infrastructure could stand as a limit to growth within the aviation tourism industry, and that increased aircraft congestion in the Alaska Range may eventually be manifested as a limit to growth for glacier landing tourism in DENA. These results hold significance for park managers, who should consider not only how crowding

within the national park boundary can be managed but should also focus attention on how crowding in the gateway community may ultimately influence the aviation tourism industry as a whole (Frauman & Banks, 2011).

The second research question in this study sought to understand stakeholder perspectives of potential management challenges for sustainably managing aviation tourism growth in DENA. Results demonstrate that stakeholders perceive a need for organized and transparent management strategies, as well as clear communication that incorporates multiple stakeholder groups from all facets of the aviation tourism industry. As such, park managers may consider opportunities to partner with local tourism agencies and aviation tourism stakeholders to integrate national park management and the broader tourism planning taking place in the Denali region (Cervený et al., 2020). For example, to fully engage local stakeholders, the NPS may consider reinstating the Aircraft Overflights Advisory Council that operated from 2007-2013 (McCool, 2009; NPS, 2016; Withers & Adema, 2010). It is particularly important for park managers to include stakeholders directly involved in offering aviation tourism services in Talkeetna and DENA given the importance of aviation to the community's economy and cultural heritage (Cervený, 2008; Sanagustín Fons & Fierro, 2011). Finally, stakeholders emphasized challenges arising from the lack of jurisdiction of the NPS in managing the airspace above the national park, suggesting that NPS managers may consider opportunities to facilitate meaningful collaboration between park management, local stakeholders and the Federal Aviation Association (FAA), who currently controls the airspace, for future aviation tourism management.

This research highlights the importance of integrating park and gateway community planning and management in the context of aviation tourism, demonstrating the benefits of considering the entirety of a tourism system and including stakeholder perspectives in sustainable tourism

development (Butler, 1999; Eagles & McCool, 2002). A lack of understanding of the community perceptions of tourism growth can leave protected area management agencies unaware of community perspectives on management decisions or of the unintended social, economic, and environmental implications of management decisions that permeate beyond the boundary of a protected area (Cervený et al., 2020). Therefore, to proactively plan for sustainable tourism and protected areas management, it is critical that park managers continue to further emphasize locally appropriate adaptation and responses to changing tourism trends that affect park visitation and gateway community tourism patterns (Eagles & McCool, 2002). Together, these steps can contribute to the increasing need for balance in economic, social, and environmental conditions within a sustainable tourism system.

As evidenced in the case of Talkeetna and DENA, national park visitation and associated tourism can provide invaluable income and employment opportunities for rural gateway communities and is therefore of critical importance for regional development. At the same time, gateway communities acting as hosts to visitors to national parks endure various complicated and potentially harmful sociocultural and environmental impacts, at times not obvious to those outside of the local community (Cervený et al., 2020; Howe et al., 1997). There is a delicate balance to optimizing the growth of aviation tourism while protecting visitor experiences in the national park, community economic needs and objectives, and social conditions within Talkeetna and DENA. By improving our understanding of the positive and negative impacts associated with the aviation tourism industry in Talkeetna and DENA and local stakeholder perspectives of management challenges, this case study delivers empirical insights into the quickly evolving aviation tourism industry in the region. Furthermore, this research makes an important contribution toward understanding the potential value of considering national park management

and gateway community planning in tandem in the context of tourism, ultimately supporting the adoption of more holistic sustainable tourism management frameworks in complex tourism systems.

CHAPTER 4

CONCLUSION

In the face of a rapidly changing natural environment and increasingly unpredictable global economy, nature-based tourism and national parks provide important opportunities to safeguard natural resources and to contribute to sustainable rural economic growth (Balmford et al., 2009). As global-scale changes continue to influence local contexts, increased consideration of the interactions of economic, social, and environmental systems affecting tourism surrounding national parks is likely to reveal resilience within local gateway communities. At the same time, it has been posited that as shifting travel trends continue to expose the interconnectedness of nature-based tourism and gateway communities, these destinations may continue feeling increased pressure from crowding, commercial interests, and conflicting stakeholder priorities (Cervený et al., 2020; Eagles & McCool, 2002). Understanding the historic and local contexts of these broader trends at a case-scale is therefore likely to prove valuable when measuring change, attempting to understand local impacts, and making management decisions in national parks and their gateway communities (Breakey, 2005; Howe et al., 1997).

The purpose of this thesis was document stakeholder perspectives of the history, development, and impacts of the flightseeing and glacier landing tourism industry in DENA while broadly integrating tourism planning, national park management, and stakeholder perspectives of history of change. Using Talkeetna, AK and DENA as the case study, the articles presented in the two preceding chapters explored the quickly growing air taxi and flightseeing tourism industry at the interface of the gateway community and the national park, while establishing a historic foundation of aviation tourism in the region. Ultimately, this thesis emphasized the local contexts of sustainable tourism growth in national parks by exploring four

main topics: 1) the history of aviation tourism in the Denali region; 2) stakeholder-identified indicators of change over time; 3) regional impacts of tourism growth and 4) stakeholder perceptions of management challenges.

This thesis used oral history, semi-structured interviews, and document analysis to answer the research questions addressed in Chapters 2 and 3. Broadly, this study demonstrated that aviation tourism in the Denali region has undergone dramatic and rapid change in recent decades and that these changes have manifested into impacts and managerial challenges for local stakeholders. This chapter briefly summarizes and synthesizes major findings from the results of both papers, considers the significance of the research findings, and summarizes the theoretical and managerial implications of this thesis.

Summary of Findings

Chapter 2 of this thesis explored the history of aviation tourism in Talkeetna, AK and stakeholder-identified indicators of change over time. Using stakeholder perspectives to reveal historical understandings of tourism growth and change, this study sought to understand, from local voices, the development process of contemporary flightseeing and glacier landing tourism in DENA. The resulting narrative account tracing the history of aviation tourism in the region stands as an important record of the growth of this unique industry, as told by the local stakeholders who lived through and influenced its development. The patterns of growth in aviation in the region demonstrate a shift from essential transportation, to air taxi services for mountaineers and backcountry recreationists, to an industry primarily driven by an increased demand for short, soft wilderness experiences through flightseeing and glacier landing tourism. These changes have in turn prompted a shift in aviation operations, equipment, marketing, and products over time.

Findings from Chapter 2 also revealed various indicators of change identified as being significant in both the community of Talkeetna and on the south side of the Alaska Range in DENA. Specifically, interviewees identified changes in air taxi operations, changes in Talkeetna, changes in wilderness experiences, and climate change as being particularly significant. These themes of change emerged from the analysis of semi-structured interviews and indicated that the changes being felt in the region were both affecting and being affected by increased demand for air taxi and flightseeing tourism services. Moreover, results show that the changes are being felt by community members and visitors beyond those most immediately involved in aviation tourism. Interviewees indicated that many of these changes can be traced back to the growing influence of the cruise industry and package tourism offerings in Alaska, marking an important transformation of tourism at the local and regional levels.

The second paper, presented in Chapter 3, shifted the focus from broad understandings of history and change toward a more narrowed approach to exploring 1) how stakeholders describe the impacts of growth in aviation tourism in the region and 2) perceived challenges for managing the growth in flightseeing and air taxi tourism in DENA. Local stakeholders identified noise, overcrowding, conflict and disagreement, and economic conditions to be the most prominent impacts of the growth in the flightseeing tourism industry. Importantly, results show that these impacts were being felt both within the gateway community of Talkeetna and in the backcountry of DENA. Crowding, for example, was identified as being an issue of significant importance within Talkeetna where increased visitation is putting pressure on local infrastructure. At the same time, stakeholders noted that there is increased crowding at the glacier landing portals in DENA, revealing important connections between impacts being felt in the park and the gateway community.

Chapter 3 also explored stakeholder identified challenges to managing the growth in aviation tourism in the region. Here, stakeholders discussed the need for collaborative management within the aviation tourism industry and frequently referenced the lack of jurisdiction of the NPS to manage airspace above the national park. Other flights coming to the south side of the Alaska Range from outside of Talkeetna were identified as contributing to the difficulty in controlling for any of the impacts caused by increased aviation, while ongoing disagreements about community priorities were identified as barriers to management within both the gateway community and the national park. Interviewees emphasized the need for cooperation among diverse stakeholder groups to find solutions to the complex issues and circumstances arising from increased air taxi and flightseeing tourism, noting that it would take input and cooperation from everyone to achieve success. Most stakeholders indicated that the only path forward with aviation tourism was to find “balance” in managing the costs and benefits of the growth of the industry.

Theoretical Insights and Contributions

This thesis has made several important theoretical contributions toward understanding local perspectives of tourism development and historical contexts within tourism research. First, this research responded to a call for increased integration of historical understandings of tourism destinations and development within the field of tourism studies, contributing a unique case study to a small but growing collection of case-specific research focusing on tourism history (Mackenzie & Gannon, 2019; Walton, 2009). By prioritizing local voices and key informants when documenting the historical arc of a nature-based tourism industry, this thesis displays the value of oral history for understanding tourism development and amplifies previous calls for the

integration of history methodologies into tourism studies (Mackenzie et al., 2019; Trapp-Fallon, 2003).

This thesis also extends previous tourism development frameworks used to explicate transformations at tourism destinations by integrating historical understandings of tourism with local perspectives of change over time. Rather than attempting to test an existing tourism development model or apply a prescriptive framework to understand aviation tourism development in Talkeetna and DENA, this research allowed a description of tourism development to emerge organically from stakeholders, reinforcing the importance of stakeholder engagement in tourism planning and management (Stewart & Draper, 2007; Wilson et al., 2018). This approach to understanding tourism development supports the notion that there are advantages to allowing more nuanced descriptions of change to emerge beyond a rigid typology of tourism development, and that there may be no universal model to predict or describe tourism development across diverse communities and environments (Sharpley, 2014).

While there is ample research in tourism studies on local perspectives and attitudes toward tourism development, this thesis helps fill important gaps in existing literature by drawing on interviews as the primary source of data. Although local attitudes toward tourism development have been studied using multiple methodological approaches, the vast majority of studies have adopted quantitative methods to explore local perspectives of tourism (Sharpley, 2014). Where quantitative methods are important when attempting to generalize stakeholder perspectives for entire populations, this thesis adds important qualitative insight into gateway community perspectives of tourism development by deviating from a preset survey instrument and relying instead on organic narratives and information sourced from interviews (Patton, 1990). This is important as the use of qualitative methods may allow for a deeper understanding of the

trajectory of growth of tourism within the gateway community and the national park, as well as demonstrate how perceptions of tourism development have shaped local understandings of impacts and challenges to managing tourism sustainably (Breakey, 2005; Jennings, 2018).

Finally, this thesis also acknowledged the growing call to integrate national park and tourism planning and management processes by highlighting the interconnectivity of aviation tourism systems and impacts across Talkeetna and DENA. By gathering stakeholder's perspectives of the impacts of aviation tourism growth within both the national park and the gateway community, this research helped to demonstrate the inherent links between tourism, parks, and local communities (Cervený et al., 2020). Furthermore, this research helped improve understanding of the positive and negative impacts (e.g. economic, social) associated with tourism systems within and surrounding national parks. Ultimately, given its success in documenting stakeholder perspectives of history, change, and tourism impacts, this research stands as an important case-study for broader understandings of nature-based tourism in gateway communities and protected areas.

Management Implications

Results from this study illustrate a range of opportunities for managers, planners, and decision-makers in Talkeetna and DENA to expand on the work presented here and to help inform future management of aviation tourism in the region. First, these results improve understanding of the history and origins of aviation tourism in Talkeetna and Denali, shedding light on the important sociocultural roots of aviation in the region. This critical understanding of the historical underpinnings of flightseeing and glacier landing tourism in DENA provides managers and planners with a valuable foundation upon which to consider the local circumstances behind aviation tourism growth, both elapsed and ongoing, and consequently

propose or implement appropriate policies and management decisions that may align better with the heritage of the gateway community (Mellon & Bramwell, 2018). Moreover, by documenting stakeholder-identified indicators of change in the region over time, these results provide managers and planners with insight into local perspectives that can help inform management decisions in the context of a rapidly changing industry (Zegre et al., 2012). Using the historic narrative presented here, park managers should consider opportunities to incorporate the aviation heritage of Talkeetna and the Denali region into contemporary park experiences for visitors. For example, educational messaging outlining the rich aviation history of Talkeetna, the history of aircraft noise in the region, and the role that aviation plays in accessing the Alaska Range may help alleviate disturbance of aviation noise in the national park (Kissick, 2018; Taff et al., 2014). By embracing and publicly acknowledging the unique history and significance of aviation in Talkeetna and DENA, managers could work toward integrating conflicting values of aviation and offsetting some of the impacts of increased aviation in the national park.

These results also improve understanding of what stakeholders perceive to be the impacts of aviation tourism growth in the Denali region, equipping agencies and managers with insight into local perceptions of positive and negative effects of tourism growth to inform potential management of commercial activities in the Alaska Range. Based on the results of this study, managers may consider instigating formal opportunities for stakeholders to engage in air taxi and scenic flight tourism management decisions beyond routine public consultation by, for example, re-establishing the Aircraft Overflights Advisory Council that operated from 2007-2013 (McCool, 2009; NPS, 2016). Additionally, the results of this thesis identified clear parallel impacts from aviation tourism in the gateway community and within the national park, indicating that park managers should pay attention to how impacts may be manifesting even outside the

boundaries of the national park itself. For example, as crowding and congestion was identified to be an impact not only in the glacier landing portals but also in Talkeetna, national park managers may devote attention to understanding how increased crowding in Talkeetna could affect future aviation tourism through potential limits to growth in the community, thus informing future management of the glacier landing portals.

Limitations

While this thesis provided important theoretical and managerial contributions, there are a number of inherent limitations that should be identified. First, logistics for this research were greatly influenced by the travel and research regulations put in place due to the COVID-19 pandemic, influencing the research design and data collection. Among the restrictions in place at the time of data collection, travel for research was prohibited, preventing opportunities to conduct in-person data collection or to travel to the field site. This research may have benefited from more time spent in Talkeetna and DENA as the primary researcher, or from engaging ethnographic methods on-site, potentially extending the local contextual understandings initiated here. As with any qualitative research project, this study may have benefitted from more time being dedicated to the data collection and analysis processes, including a greater focus on rapport-building, community engagement through informal meetings and interviews, and more time spent becoming familiar with the case-study site (Hillman & Radel, 2018).

The influence of the COVID-19 pandemic also greatly affected the circumstances surrounding tourism in Talkeetna during the 2020 field season, potentially influencing the ways in which informants described tourism in the region. While the slowdown in tourism due to COVID-19 revealed important and interesting insights from stakeholders, the atypical year may have altered results that would have otherwise been attained if the pandemic had not dramatically

altered local tourism conditions. These atypical circumstances are therefore recognized as being a potential disruption to the study results but also adding a valuable contribution to the results that ultimately emerged.

The breadth of interviewees engaged in this research is also a potential limitation of the study: while informants represented a diversity of stakeholders within Talkeetna and DENA, there were multiple stakeholder groups in which representatives did not agree to participate in interviews or were not identified as being key informants but could still have added depth to the contexts described here. Moreover, not every potential informant was interviewed from each stakeholder group, meaning there may have been local voices left out of this study; results therefore do not represent a complete understanding of local perspectives in the Denali region. A further limitation from the interviews is that a thorough member checking process was not conducted before publication of this thesis, meaning interviewees did not reconfirm the findings synthesized here.

Finally, theoretical limitations exist in this research, specifically within the concepts of tourism history and sustainable tourism development. First, history is well-understood to be highly influenced by the voices involved in presenting and writing the historical narrative, thus raising concerns of the objectivity of any attempt to author history (Blake, 1955). It is therefore important to acknowledge that this thesis represents only one documentation of the history of aviation tourism and is merely a reflection of the stories and themes that emerged from interviews and subsequent validation through document analysis. Moreover, context is incredibly important when considering tourism development given the unique arrangement of social, economic, environmental, and political systems in each gateway community – the situation in the

case study of Talkeetna and Denali will therefore be different than any other tourism context and research findings should not be generalized (Yin, 2012).

Future Research Directions

Given the narrow scope of this research on aviation tourism in DENA and the gateway community of Talkeetna, there are several opportunities for future research to expand upon the findings from this thesis, both specific to this case study and more broadly when considering destinations with different social, environmental, and political circumstances.

Future research on the glacier landing portals and aviation tourism in the Denali region should consider implementing other methods of data collection (i.e., mixed and quantitative methods) to address and account for different variables that could not be captured through this exploratory research design and qualitative data. While this research provided important stakeholder-sourced information that can act as a foundation for future research, there are numerous topics that could be explored more in-depth through methods such as surveys, longitudinal studies, or mixed-methods, each of which would lead to greater validity of the findings. Importantly, this study examined perspectives of *local stakeholders* within the aviation tourism industry and specifically did not draw on insights from visitors to the Denali region. Future research, therefore, should consider the perspectives of tourists and recreationists engaged in aviation tourism, as their voices will also be required to assess the potential effects of commercial aviation on visitors (Watson et al., 2015; Sharpley, 2014). Based on the results from this exploratory study, future research on aviation tourism in the Denali region should emphasize impacts of noise, crowding and congestion, safety, and the economic impacts of the tourism industry in both Talkeetna and the national park.

Beyond the case presented here in the Denali region, future research seeking to integrate stakeholder perspectives of history and change with tourism and national park management should prioritize framing the interconnectedness of tourism in national parks and gateway communities. In future studies of this nature, a different approach to stakeholder engagement may prove useful, such as moving from a traditional top-down style of research toward a research style in which stakeholder voices direct research processes (Goebel et al., 2020; Stewart & Draper, 2007). Finally, this thesis provides a useful starting point for considering tourism, national parks, and gateway communities in tandem, and future research may explore opportunities to integrate these concepts into a cohesive and replicable analytical framework.

REFERENCES

- Absher, J. D., Kasul, R. L. & Chang, W. H. (2003). Methodological and conceptual issues in the development of customer service measures for the national recreation reservation service. In *Proceedings of the 2003 Northeastern Recreation Research Symposium*, (pp. 54–59). Newton Square, PA: U.S. Forest Service, Northeastern Research Station.
- Andereck, K. L., & Nyaupane, G. P. (2011). Exploring the nature of tourism and quality of life perceptions among residents. *Journal of Travel Research*, 50(3), 248-260.
- Anderson, R. (1946). *Alaska's recreation riches*. Alaska Development Board, Juneau, AK. 1-76.
- Ap, J. (1992). Residents' perceptions on tourism impacts. *Annals of tourism Research*, 19(4), 665-690.
- Archer, B., Cooper, C., & Ruhanen, L. (2005). The positive and negative impacts of tourism. *Global tourism*, 3, 79-102.
- Balmford, A., Beresford, J., Green, J., Naidoo, R., Walpole, M., & Manica, A. (2009). A global perspective on trends in nature-based tourism. *PLoS Biol*, 7(6), 1-6.
- Baum, T. (1998). Taking the exit route: Extending the tourism area life cycle model. *Current Issues in Tourism*, 1(2), 167-175.
- Bennett, A., & Elman, C. (2006). Qualitative research: Recent developments in case study methods. *Annual Review of Political Science*, 9, 455-476.
- Besculides, A., Lee, M. E., & McCormick, P. J. (2002). Residents' perceptions of the cultural benefits of tourism. *Annals of tourism research*, 29(2), 303-319.
- Blahna, D. J., Kline, J. D., Williams, D. R., Rogers, K., Miller, A. B., McCool, S. F., & Valenzuela, F. (2020). Integrating social, ecological, and economic factors in sustainable recreation planning and decision making. In: Selin, S., Cervený, L. K., Blahna, D. J., &

- Miller, A. B. (Eds.), *Igniting research for outdoor recreation: linking science, policy, and action. Gen. Tech. Rep. PNW-GTR-987*. (pp.173-188). US Department of Agriculture, Forest Service, Pacific Northwest Research Station.
- Blake, C. (1955). Can history be objective?. *Mind*, 64(253), 61-78.
- Bowen, G. A. (2009). Document analysis as a qualitative research method. *Qualitative Research Journal*, 9(2), 27-40.
- Boyd, S. W. (2006). The TALC model and its application to national parks: A Canadian example. *The Tourism Area Life Cycle*, 1, 119-138.
- Bramwell, B., & Lane, B. (2011). Critical research on the governance of tourism and sustainability. *Journal of Sustainable Tourism*, 19(45), 411-421.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative research in psychology*, 3(2), 77-101.
- Breakey, N. M. (2005). *Tourism destination development: Beyond Butler*. [Unpublished doctoral dissertation]. The University of Queensland.
- Bremner, H., & Wikitera, K. A. (2016). Using history for tourism or using tourism for history? Examples from Aotearoa/New Zealand. *Journal of Tourism History*, 8(3), 260-274.
- Brouder, P., & Eriksson, R. H. (2013). Tourism evolution: On the synergies of tourism studies and evolutionary economic geography. *Annals of Tourism Research*, 43, 370-389.
- Brouder, P. (2014). Evolutionary economic geography and tourism studies: Extant studies and future research directions. *Tourism Geographies*, 16(4), 540-545.
- Buckley, R. (2001). Environmental impacts. In Weaver, D. (Ed.), *The Encyclopedia of Ecotourism*. (pp. 379-394). CABI Publishing.

- Buckley, R., Pickering, C., & Weaver, D. B. (2003). *Nature-based tourism, environment and land management*. CABI Publishing.
- Budeanu, A., Miller, G., Moscardo, G., & Ooi, C. S. (2016). Sustainable tourism, progress, challenges and opportunities: an introduction. *Journal of Cleaner Production* 111(2), 285-294.
- Bushell, R., & Eagles, P. F. J. (Eds.). (2006). *Tourism and protected areas: Benefits beyond boundaries*. The Vth IUCN World Parks Congress. CABI Publishing.
- Butler, R. W. (1980). The concept of a tourist area cycle of evolution: Implications for management of resources. *Canadian Geographer/Le Géographe Canadien*, 24(1), 5-12.
- Butler, R. W. (1999). Sustainable tourism: A state-of-the-art review. *Tourism geographies*, 1(1), 7-25.
- Butler, R. W. (2004). Geographical research on tourism, recreation and leisure: Origins, eras and directions. *Tourism Geographies*, 6(2), 143-162.
- Butler, R. W. (Ed.). (2006). *The Tourism Area Life Cycle: Applications and Modifications* (Vol. 1). Channel View Publications.
- Butler, R. W., & Boyd, S. W. (2000). *Tourism and National Parks*. Wiley.
- Byrd, E. T. (2007). Stakeholders in sustainable tourism development and their roles: Applying stakeholder theory to sustainable tourism development. *Tourism Review*, 62(2), 6.
- Canosa, A., Moyle, B. D., & Wray, M. (2016). Can anybody hear me? A critical analysis of young residents' voices in tourism studies. *Tourism Analysis*, 21(2-3), 325-337.
- Cervený, L. (2008). *Nature and tourists in the last frontier: Local encounters with global tourism in coastal Alaska*. Cognizant Communication Corporation. Elmsford, NY.

- Cervený, L. K., Sánchez, J. J., Helmer, M., & Milnor, A. (2020). Public Lands, Tourism, and Community Connections. In: Selin, S., Cervený, L. K., Blahna, D. J., & Miller, A. B. (Eds.), *Igniting research for outdoor recreation: linking science, policy, and action. Gen. Tech. Rep. PNW-GTR-987*. (pp.115-132). US Department of Agriculture, U.S. Forest Service, Pacific Northwest Research Station.
- Choe, Y., & Schuett, M. A. (2020). Stakeholders' perceptions of social and environmental changes affecting Everglades National Park in South Florida. *Environmental Development*, 35, 100524.
- Christensen, N., Watson, A. E., & Kneeshaw, K. (2005). *Denali National Park and Preserve Fly-in Recreation Visitor Study*. Aldo Leopold Wilderness Research Institute.
- Creswell, J. W. (2014). *A concise introduction to mixed methods research*. SAGE publications.
- Cullinane Thomas, C., & Koontz, L. (2020). *2019 National park visitor spending effects: Economic contributions to local communities, states, and the nation*. Natural Resource Report, National Park Service. Retrieved from:
<http://pubs.er.usgs.gov/publication/70211321>
- Dangi, T. B., & Gribb, W. J. (2018). Sustainable ecotourism management and visitor experiences: Managing conflicting perspectives in Rocky Mountain National Park, USA. *Journal of Ecotourism*, 17(3), 338-358.
- Doxey, G. V. (1975) A causation theory of visitor resident irritants: Methodology and research inferences. In *The impact of tourism, Travel Research Association Sixth Annual Conference Proceedings*. San Diego, pp. 195-198.
- Duffy, R. (2015). Nature-based tourism and neoliberalism: Concealing contradictions. *Tourism Geographies*, 17(4), 529–543.

- Dunning, A. E. (2005). Impacts of transit in national parks and gateway communities. *Transportation Research Record: Journal of the Transportation Research Board*, 1931(1), 129-136.
- Eagles, P. F. J. (2014). Research priorities in park tourism. *Journal of Sustainable Tourism*, 22(4), 528-549.
- Eagles, P. F. J., & McCool, S.F. (2002). *Tourism in National Parks and Protected Areas: Planning and Management*. CABI Publishing.
- Eagles, P. F. J, McCool, S. F., & Haynes, C. D. (2002). *Sustainable tourism in protected areas: Guidelines for planning and management*. International Union for the Conservation of Nature.
- Ferreira, S., & Harmse, A. (2014). Kruger National Park: Tourism development and issues around the management of large numbers of tourists. *Journal of Ecotourism*, 13(1), 16–34.
- Figgis, P., Bushell, R., & Eagles, P. F. (2007). Tourism as a tool for community-based conservation and development. In Bushell, R., & Eagles, P. F. J. (Eds.), *Tourism and Protected Areas: Benefits Beyond Boundaries: the Vth IUCN World Parks Congress*. (pp. 101-118). CAB International.
- Fix, P. J., Ackerman, A., & Fay, G. (2013). *2011 Denali National Park and Preserve visitor characteristics*. Natural Resource Technical Report NPS/AKR/NRTR-2013/669. National Park Service, Fort Collins, Colorado.
- Frauman, E., & Banks, S. (2011). Gateway community resident perceptions of tourism development: Incorporating Importance-Performance Analysis into a Limits of Acceptable Change framework. *Tourism Management*, 32(1), 128-140.

- Fredman, P. (2004). *Short-term effects of national park designation on tourism*. Paper presented at the 2004 International Symposium on Society and Resource Management. Keystone, Colorado, USA.
- Gibson, L. (2006). *Learning destinations: The complexity of tourism development*. [Unpublished Doctoral Dissertation]. Karlstad University.
- Goebel, K., Camargo-Borges, C., & Eelderink, M. (2020). Exploring participatory action research as a driver for sustainable tourism. *International Journal of Tourism Research*, 22(4), 425-437.
- Hall, C. M., & Page, S. J. (2014). *The geography of tourism and recreation: Environment, place and space*. Routledge.
- Hanpachern, R., & Chatkaewnapanon, Y. (2013). Understanding a tourist destination: A tourism history approach. *International Journal of Asian Social Science*, 3(12), 2399-2408.
- Haukeland, J. V. (2011). Tourism stakeholders' perceptions of national park management in Norway. *Journal of Sustainable Tourism*, 19(2), 133-153.
- Hesse-Biber, S.N., & Leavy, P. (2006). *The Practice of Qualitative Research*. SAGE Publications, Inc.
- Hillman, W., & Radel, K. (Eds.). (2018). *Qualitative methods in tourism research: Theory and practice*. Channel View Publications.
- Hobson, J. P. (1993). Analysis of the US cruise line industry. *Tourism Management*, 14(6), 453-462.
- Howe, J., McMahon, E. T., & Propst, L. (1997). *Balancing nature and commerce in gateway communities*. Island Press.

- Imran, S., Alam, K., & Beaumont, N. (2014). Environmental orientations and environmental behaviour: Perceptions of protected area tourism stakeholders. *Tourism Management*, 40, 290-299.
- Inskip, E. (1991). *Tourism planning: An integrated and sustainable development approach*. Wiley.
- Ioannides, D. (2003). The economics of tourism in host communities. In Singh, S., Timothy, D. J., Dowling, R. K. (Eds.), *Tourism in destination communities*. (pp. 37-55). CABI Publishing.
- Jamal, T. and Getz, D., (1999). Community roundtables for tourism-related conflicts: The dialectics of consensus and process structures. *Journal of Sustainable Tourism*, 7, 290-313.
- Jennings, G. R. (2018). Qualitative research and tourism studies. In Cooper, C., Volo, S., Gartner, W. C., & Scott, N. (Eds). *The Sage handbook of tourism management theories: Concepts and disciplinary approaches to tourism*. (pp. 5-33). SAGE Publications, Inc.
- Jones, C., Shipley, N., & Ul-Hasan, S. (2017). Bringing parks back to the people: Revisiting the dual mandate and core values of the National Park Service. In *The George Wright Forum*. Vol. 34, No. 1. (pp. 45-52). George Wright Society.
- Kastarlak, B. I., & Barber, B. (2012). *Fundamentals of Planning and Developing Tourism*. 1st Edition. Pearson.
- Kedrowski, J. J. (2009). *Climbers' Perceptions of McKinley (Denali), "The High One" – Climbers' Perceptions on McKinley: Crowding Concerns, Hazards, and Climber Demographics*. NPS Report. NPS Study # DENA-00789. Denali National Park and Preserve.

- Kissick, J.S. (2018). *Visualisation of tranquillity in a New Zealand National Park setting*. [Unpublished Master's thesis]. University of Canterbury.
- Kuenzi, C., & McNeely, J. (2008). Nature-based tourism. In Renn, O. & Walker, K.D. (Eds.), *Global risk governance* (pp. 155-178). Springer.
- Lagiewski, R. M. (2006). The application of the TALC model: A literature survey. In R.W. Butler (Ed.): *The tourism area life cycle. Vol. 1 Applications and modifications*. Channel View Publications.
- Lane, A. E. (1996). Scenic air tours over our national parks: Exploitation of our national resources or environmental solution. *Journal of Air Law and Commerce*, 62, 523-558.
- Lankford, V.; Howard, D. 1993. Developing a tourism impact attitude scale. *Annals of Tourism Research*. 21. 121-139
- Leung, Y. F., Spenceley, A., Hvenegaard, G.T., & Buckley, R. (2018). *Tourism and visitor management in protected areas: guidelines for sustainability: Best Practice Protected Area Guidelines Series No. 27*. International Union for Conservation of Nature. Gland, Switzerland.
- Lowe, L. (2013, June). The Pilots of Mount McKinley: For 50 years, the world has reached the mountain on airplanes from one small town. *Air & Space Magazine*. Retrieved from: <https://www.airspacemag.com/flight-today/the-pilots-of-mount-mckinley-70025739/>
- Ma, M., & Hassink, R. (2013). An evolutionary perspective on tourism area development. *Annals of Tourism Research*, 41, 89-109.
- Mackenzie, N., & Gannon, M. J. (2019). Exploring the antecedents of sustainable tourism development. *International Journal of Contemporary Hospitality Management*, 31 (6), 2411-2427.

- Mackenzie, N. G., Pittaki, Z., & Wong, N. (2019). Historical approaches for hospitality and tourism research. *International Journal of Contemporary Hospitality Management*, 4(32), 1469-1485.
- McCool, S. F. (2009). Constructing partnerships for protected area tourism planning in an era of change and messiness. *Journal of Sustainable Tourism*, 17(2), 133-148.
- McCool, S. F., & Moisey, R. N. (2008). Introduction: Pathways and pitfalls in the search for sustainable tourism. *Tourism, Recreation and Sustainability*, 1-16.
- McDowell Group. (2017). *Alaska Visitor Statistics Program 7 – Summer 2016*. Retrieved from: <https://www.alaskatia.org/wp-content/uploads/Full-AVSP-VII-Report.pdf>
- McDowell Group. (2018). *Economic Impact of Alaska's Visitor Industry*. Alaska Department of Commerce, Community, and Economic Development.
- Mellon, V., & Bramwell, B. (2018). The temporal evolution of tourism institutions. *Annals of Tourism Research*, 69, 42-52.
- Miles, M. B., Huberman, A. M., & Saldaña, J. (2014). *Qualitative data analysis: A methods sourcebook*. 3rd ed. SAGE Publications, Inc.
- Miller, N. P. (1999). The effects of aircraft overflights on visitors to U.S. National Parks. *Noise Control Engineering Journal* 47(3): 112–117.
- Milne, S., & Ateljevic, I. (2001). Tourism, economic development and the global-local nexus: Theory embracing complexity. *Tourism Geographies*, 3(4), 369-393.
- Morgan, D.T. (1935, April 12). Grandeur Seen From Air On Trip Awe Inspiring Beauty Graces Utility. *The Nome Daily Nugget*, pp. 1-3
- Norris, F. 2009. Mountaineering management on Mount McKinley: Unraveling a crisis at the 17,000-foot level. In Harmon, D. (Ed), *People, Places, and Parks: Proceedings of the*

- 2009 George Wright Society Conference on Parks, Protected Areas, and Cultural Sites. (pp. 195–201). The George Wright Society.
- National Parks Air Tour Management Act. (2000). 49-USC §§40128
- NPS. (2002). *National Register of Historic Places Registration Form for Talkeetna Airstrip*. Form 10-900. Retrieved from:
https://npgallery.nps.gov/NRHP/GetAsset/NRHP/02000814_text
- NPS. (2006). *Final Backcountry Management Plan, General Management Plan Amendment, and Environmental Impact Statement*. U.S. Department of the Interior.
- NPS. (2016). *Denali's Aircraft Overflights Advisory Council*. Denali National Park and Preserve. Retrieved from: <https://www.nps.gov/articles/denali-aircraft-overflights.htm>
- NPS. (2020a). *Denali National Park and Preserve Annual Park Recreation Visitation (1904 - Last Calendar Year)*. National Park Service Visitor Statistics. U.S. Department of the Interior.
- NPS. (2020b). Denali National Park and Preserve Public Map. Retrieved from:
<https://www.nps.gov/dena/planyourvisit/upload/1000parkmap.jpg>
- Ogorelc, A. (2009). Residents' perceptions of tourism impacts and sustainable tourism development. *International Journal of Sustainable Economy*, 1(4), 373-387.
- O'Leary, Z. (2014). *The essential guide to doing your research project*. 2nd ed. SAGE Publications, Inc.
- Patton, M. Q. (1990). *Qualitative evaluation and research methods*. SAGE Publications, Inc.
- Patton, M. Q. (2002). Two decades of developments in qualitative inquiry: A personal, experiential perspective. *Qualitative social work*, 1(3), 261-283.

- Poudel, S., Nyaupane, G. P., & Budruk, M. (2016). Stakeholders' perspectives of sustainable tourism development: A new approach to measuring outcomes. *Journal of Travel Research*, 55(4), 465-480.
- Puhakka, R., & Saarinen, J. (2013). New role of tourism in national park planning in Finland. *The Journal of Environment & Development*, 22(4), 411-434.
- Quinn, T. (2002). *Public lands and private recreation enterprise: policy issues from a historical perspective. General Technical Report*. PNW-GTR-556. US Department of Agriculture, Forest Service, Pacific Northwest Research Station.
- Roe, D., Leader-Williams, N. & Dalal-Clayton, B. (1997). *Take only photographs, leave only footprints: The environmental impacts of wildlife tourism*. IIED Publications.
- Rubin, H. J. and Rubin, I. S. (2005) *Qualitative Interviewing: The Art of Hearing Data*. SAGE Publications, Inc.
- Ruhanen, L., Weiler, B., Moyle, B. D., & McLennan, C. L. J. (2015). Trends and patterns in sustainable tourism research: A 25-year bibliometric analysis. *Journal of Sustainable Tourism*, 23(4), 517–535.
- Saldaña, J. (2016). *The Coding Manual for Qualitative Researchers*. 3rd Ed. SAGE Publications, Inc.
- Sanagustín Fons, M., & Fierro, J. A. M. (2011). Rural tourism: A sustainable alternative. *Applied Energy*, 88(2), 551-557.
- Sharpley, R. (2000). Tourism and sustainable development: Exploring the theoretical divide. *Journal of Sustainable Tourism*, 8(1), 1-19.
- Sharpley, R. (2002). The consumption of tourism. In Sharpley, R. & Telfer, D. J. (Eds) *Tourism and development: Concepts and issues*. 300-318.

- Sharpley, R. (2014). Host perceptions of tourism: A review of the research. *Tourism Management, 42*, 37-49.
- Sheldon, R. (1995). *The Heritage of Talkeetna*. Talkeetna Editions.
- Stake, R. E. (1995). *The art of case study research*. SAGE Publications, Inc.
- Stein, G. C. (1982). *An Overview of Aviation History in Alaska With an Emphasis on Float and Ski Plane Use*. Report for the Division of Research and Development Policy Research and Land Entitlement. State of Alaska.
- Stewart, E. J., & Draper, D. (2007). A collaborative approach to understanding local stakeholder perceptions of tourism in Churchill, Manitoba (Canada). *Polar Geography, 30*(1-2), 7-35.
- Stoker, P., Rumore, D., Romaniello, L., & Levine, Z. (2020). Planning and Development Challenges in Western Gateway Communities. *Journal of the American Planning Association, 87*(1), 21-33.
- Stylidis, D., Biran, A., Sit, J., & Szivas, E. M. (2014). Residents' support for tourism development: The role of residents' place image and perceived tourism impacts. *Tourism Management, 45*, 260-274.
- Taff, B. D., Weinzimmer, D., & Newman, P. (2015). Mountaineers' wilderness experience in Denali National Park and Preserve. *International Journal of Wilderness, 21*(2), 7-15.
- Taff, B. D., Newman, P., Lawson, S. R., Marin, L. D., Gibson, A. W., Archie, T., & Bright, A. (2014). The role of messaging and acceptability of military aircraft sounds in Sequoia National Park. *Applied Acoustics, 84*, 122-128.
- Task Force on Travel and Competitiveness. (2012). *National Travel and Tourism Strategy*. Department of Commerce and Department of the Interior, Washington, DC.
- Talkeetna Chamber of Commerce. (2019). *Talkeetna Gateway to Denali: 2019 Visitor Guide*.

- Towner, J. (1988). Approaches to tourism history. *Annals of Tourism Research*, 15(1), 47-62.
- Towner, J. (1996). *An historical geography of recreation and tourism in the western world: 1540-1940*. John Wiley & Sons Ltd.
- Trapp-Fallon, J. M. (2003). Searching for rich narratives of tourism and leisure experience: How oral history could provide an answer. *Tourism and Hospitality Research*, 4(4), 297-305.
- Tranel, M. J. (2006). Denali air taxis: Unique relationships with the park and visitors. In Harmon, D. (Ed.), *People, Places, and Parks: Proceedings of the 2005 George Wright Society Conference on Parks, Protected Areas, and Cultural Sites*. (pp. 242-248). The George Wright Society.
- UNWTO. (2013). *World Tourism Barometer*. Vol. 11. Retrieved from http://dtx-tq4w60xqpw.cloudfront.net/sites/all/files/pdf/unwto_barom13_02_apr_excerpt_0.pdf.
- UNWTO & UNDP. (2017). *Tourism and the sustainable development goals – Journey to 2030*. UNWTO. Madrid.
- Walton, J. K. (1997). Review articles: Taking the history of tourism seriously. *European History Quarterly*, 27(4), 563-571.
- Walton, J. K. (2009). Prospects in tourism history: Evolution, state of play and future developments. *Tourism Management*, 30(6), 783-793.
- Wang, Y., Pfister, R. E., & Morais, D. B. (2006). Residents' attitudes toward tourism development: A case study of Washington, NC. *Proceedings of the 2006 Northeastern Recreation Research Symposium*. Bolton Landing, NY, 411-421.
- Watson, A. E., Cordell, H. K., Manning, R., & Martin, S. (2015). The Evolution of Wilderness Social Science and Future Research to Protect Experiences, Resources, and Societal Benefits. *Journal of Forestry*, 114(3), 329–338.

- Watson, A. E., Knotek, K., & Christensen, N. (2008). On the outside looking in: Fly-in recreation day use visitor experiences in the south district of Denali National Park and Preserve. *International Journal of Wilderness*, 14 (2): 19-23.
- Wilson, E., Nielsen, N., Scherrer, P., Caldicott, R. W., Moyle, B., & Weiler, B. (2018). To climb or not to climb? Balancing stakeholder priorities at an iconic national park. *Journal of Ecotourism*, 17(2), 140-159.
- Withers, J., & Adema, G. (2010). Soundscapes monitoring and an overflight advisory group: Informing real-time management decisions at Denali. *Park Science* 26(3): 42-45.
- World Commission on Environment and Development (WCED). (1987). *Our Common Future*. Oxford University Press.
- World Tourism Organization. (2013). *Sustainable Tourism for Development Guidebook — Enhancing Capacities for Sustainable Tourism for Development in Developing Countries*. UNWTO: Madrid, Spain.
- World Travel and Tourism Council. (2020). *Global Economic Impacts and Trends 2019*. WTTC Research. Retrieved from: <https://wttc.org/Research/Economic-Impact>
- Yin, R. K. (2003). *Case study research: Design and methods*. 3rd Ed. SAGE Publications, Inc.
- Yin, R. K. (2012). *Case study methods*. In Cooper, H., Camic, P. M., Long, D. L., Panter, A. T., Rindskopf, D., & Sher, K. J. (Eds.) *APA handbook of research methods in psychology*. Vol. 2. Research designs: Quantitative, qualitative, neuropsychological, and biological (p. 141–155). American Psychological Association.
- Zegre, S. J., Needham, M. D., Kruger, L. E., & Rosenberger, R. S. (2012). McDonaldization and commercial outdoor recreation and tourism in Alaska. *Managing Leisure*, 17(4), 333-348.

Appendix

Interview Guide

Section I: History of Aviation Tourism

1. Can you describe to me your personal history with aviation tourism?
 - a. How long have you been working in the Denali region?
 - b. How did you first come to start working here?
2. Tell me about what your [business] [organization] does in relation to [aviation] tourism and glaciers here in the Denali region.
 - a. What is your position within this industry? What does your job entail?
 - b. How many employees does your business/organization have working in the tourism sector?
 - c. Is your business/job involved with specific glaciers/areas in the backcountry? Which ones?
3. In your own words, can you describe the history of aviation in this area?
 - a. What do you think aviation looked like in this region when it first began?
 - b. Where did you learn about the history of aviation in this area?
4. How has aviation here changed since those early beginnings?
5. How do you think aviation industry grew to include tourism in this region?
 - a. When did this change start to occur?
 - b. Were there specific catalysts for this change? What were they?
6. Can you describe the role that aviation played in growing the general tourism sector in DENA, if any?
 - a. Does the historic role of aviation in the tourism sector differ from its role today? If so, how?
7. What role has aviation traditionally played in the culture of the communities surrounding the park?
 - a. Has aviation affected the growth of these communities over time? If so, please describe what you know/have seen of this process.
8. Are there any prominent historic figures that you would attribute to the growth of aviation tourism in this region? If so, who, and why?
 - a. Did you know these figures personally?
 - b. What made their story surrounding aviation tourism so impactful?

Section II: Glacier-Based Tourism

9. Can you describe the importance of glaciers for the aviation tourism industry in DENA?

10. What, in your opinion, makes the glaciers of the Alaska Range so special?
11. What, if any, changes have you seen in the seasonality of glacier landings or in the glaciers themselves over time?
 - a. Have you heard of or seen firsthand any notable changes to the glacial landscape you work in? What is the nature of these changes?

Section III: Visitor Experience

12. In your own words, describe the products/experiences that the aviation tourism industry offers today in DENA.
13. Describe what a typical day trip to a glacier in DENA looks like.
14. Why do you think visitors choose to participate in aviation tourism to the glaciers in DENA?
 - a. What do you think they are seeking to find/experience on these excursions?
 - b. Do you think they achieve the goals they set out with on these glacier excursions?
15. What factors do you believe influence visitors' choices in participating in an overflight scenic tour without a glacier landing vs. one with a glacier landing?
16. How important are the glaciers in the national park to your [business] [job] [industry]?

Section IV: Change Over Time

17. What kinds of changes have you seen in aviation tourism in your time working in the industry?
18. In your own words, what do visitor conditions look like on the glacier today?
 - a. How many planes/tourists would you say are on the glacier at any given time during the peak of the season?
 - b. Does this differ from visitor conditions when you first began working in the industry? If so, how?
19. How do you expect the aviation/glacier tourism industry to change in the future?
 - a. What do you think will be the driving force behind these changes?
20. In your own words, what impacts or outcomes have you seen arise from the growth in aviation tourism in the region?
21. Is there anything else you would like to share that has not been covered in this interview today?