

YELLOWSTONE NATIONAL PARK & THE WINTER USE DEBATE:
COMMUNITY RESILIENCE AND TOURISM IMPACTS IN THE
GATEWAY COMMUNITY OF WEST YELLOWSTONE, MT

by

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A thesis submitted in partial fulfillment
of the requirements for the degree

of

Master of Science

in

Earth Sciences

MONTANA STATE UNIVERSITY
Bozeman, Montana

April, 2016

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ACKNOWLEDGEMENTS

I wish to thank my advisor, Dr. Julia Haggerty, for her limitless help and extraordinary guidance. I also wish to express my deep appreciation for my committee members, Dr. Ray Rasker and Dr. Bill Wyckoff, for their insight and assistance. This thesis would not have been possible without the contributions of many of the fine residents of West Yellowstone, the National Park Service, Montana State University Library, University of Montana's Institute for Tourism and Recreation Research, and the Institute on Ecosystems. Finally, and most importantly, I would like to thank my parents, Bruce and Mary, for all of their support and love throughout my life. I also want to thank my older brother, Brian, for all the lessons he taught me both directly and indirectly. Life is special. I will never forget you.

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ABSTRACT

This study explores the socioeconomic impacts of the National Park Service's winter use management of Yellowstone National Park on the gateway community of West Yellowstone, Montana. As a highly specialized, tourism-dependent gateway community, the National Park Service's management decisions that affect park visitation also impact the economic viability of West Yellowstone. Previously, scholars have documented the challenges presented by tourism economies and 'resortification' in small communities, the process of a small town being converted into a resort destination with numerous vacation properties, increasing absentee business ownership, a highly seasonal economy and escalating real estate prices. Less is known about how the challenges of resortification and industrial tourism interact with the dimensions of community resilience within a gateway community. Community resilience exists as a mechanism for rural and remote communities to identify vulnerabilities, buffer change, develop resources and promote local progress during periods of uncertainty and stress. This paper explores how the snowmobiling restrictions and winter use management of Yellowstone National Park impacted the community resilience of the tourism-dependent gateway community of West Yellowstone. The debate over winter use management and snowmobiling restrictions in Yellowstone National Park drained the community resources of West Yellowstone and negatively impacted the economic viability of local wintertime businesses. Consequently, challenges of resortification intensified and diminished several dimensions of West Yellowstone's community resilience. The mixed methods approach provides insight to how West Yellowstone's social and economic well-being have been affected since the snowmobiling restrictions were implemented and how the tourism landscape of the entire Yellowstone region has changed. The case study of West Yellowstone contributes knowledge of the economics of gateway communities, the implications of federal land management decisions, and the community resilience of tourism-dependent, gateway towns.

CHAPTER 1 - INTRODUCTION & LITERATURE REVIEW

Introduction

According to a 2015 National Park Service (NPS) report, in 2014, 292 million visitors to the National Park System spent \$15.7 billion in the local gateway communities (Thomas, Huber, & Koontz, 2015). At Yellowstone National Park (YNP), a crown jewel of the national park system, 3.5 million visitors spent an estimated \$421 million in the gateway communities and supported nearly 6.7 thousand jobs in the surrounding area (Thomas et al., 2015). Gateway towns, portals to some of America's most scenic and historic national treasures, depend on tourism to support their local economies. This dependency on tourism exposes gateway towns to the exogenous forces, such as federal land-management policy, that affect visitation. Over the past fifteen years, West Yellowstone, a primary gateway town of Yellowstone National Park and 'Snowmobile Capital of the World,' has been at the center of a NPS management debate regarding winter use and the admittance of snowmobiles in YNP. Concurrently, the town has been struggling with the rapid changes brought about by resortification, the disruption of a cultural ecosystem by tourism development and population growth (Naimark, 2006). This thesis explores how the winter use debate, the publication and reversals of numerous NPS winter management plans for YNP, affected the capacity of West Yellowstone to cope with the challenges of resortification.

Government agencies, restricted by tight budgets and limited resources, rarely have the time or opportunity to conduct post facto analyses of the socioeconomic effects

of their policy changes and management plans. It is an analysis that compares predicted and realized impacts of a given project or management decision (Gramann, 1983).

Therefore, as the NPS managers of YNP continue to look forward toward future policy decisions, it creates an unexplored gap to study the effects of the winter use debate on the community resilience and local economy of West Yellowstone. Some economists suggest that through the protection and preservation of scenic public lands, a small gateway community can position and enable itself to promote a more sustainable local economy based on natural amenities and tourism rather than natural resource extraction (Power, 1996; Power & Barrett, 2001). But the theory has done little to explain how a tourism-dependent gateway town can maintain robust community resilience in the face of a rapidly changing and globalizing world. This study evaluates the impacts of the NPS winter use management debate on the community resilience of the gateway town of West Yellowstone.

Gateway communities are an understudied, but emerging subject within the tourism and rural studies scholarship (Bec, McLennan, & Moyle, 2015). Utilizing West Yellowstone as a case study of a classic tourism-dependent gateway community, the results of this analysis are applicable to the numerous other gateway communities neighboring flagship parks and forests. A study of this type can inform NPS managers and policy makers about the social and economic implications of their decisions as well as further their understanding of the internal functioning of gateway communities and offer an opportunity for social learning through the process.

Specifically related to West Yellowstone, the following questions and issues arise.

(1) How did the winter use restrictions and management uncertainty challenge and affect the community resilience of West Yellowstone? (2) In the early Environmental Impact Statements (EIS) reports, what were the projected socioeconomic impacts on the gateway community of West Yellowstone of the stricter winter use management of YNP and how do these compare to actual observations? (3) How did the local businesses, government and residents of West Yellowstone respond to changes in permissible snowmobile use in YNP? (4) How have these developments influenced how local businesses perceive the primary drivers of their local economy and how their local economy has adapted over time to shocks and stressors like the NPS' winter use management plan(s)? (5) Apart from the YNP winter use debate, what other external forces are influencing the tourism economy of West Yellowstone and what challenges and opportunities do they present?

As the oldest and one of the most popular national parks (National Park Service Visitor Use Statistics, 2016), the management of YNP is under constant scrutiny and attracts criticism from numerous perspectives. The scenery of the park is a majestic national treasure that thousands of people share every winter, but should visitors enjoy it from atop a snowmobile or by cross country skis? Residents of gateway communities depend on NPS visitors throughout the entire year to spend outside capital and power their local economies. Therefore any NPS management decision that affects visitation to the park unit also affects the viability of the gateway town. Congress directs the NPS to consider modern visitor experience and enjoyment as well as the impact of visitors on the unique resources of each park unit. The 1916 Organic Act directs the National Park

Service to “...leave them [national parks and monuments] unimpaired for the enjoyment of future generations,” so does this mean the NPS should prohibit snowmobiling and its air and noise pollution in YNP? If so, the economic harm caused by banning snowmobiling is something the NPS must consider under NEPA (National Environmental Policy Act). Furthermore, the Organic Act also mandates that the NPS promote the use and enjoyment of the National Park System, precisely what the snowmobilers are experiencing. These questions and concerns of varying perspectives of YNP management are complex and make satisfying compromises nearly impossible. NPS policy makers have difficult management decisions and studying the consequences of their actions can assist future planning processes and inform management decisions in YNP as well as the rest of the national park system. Analyzing the impacts of the YNP winter use management debate on West Yellowstone will supply new information to gateway communities and further the study of community resilience and socioeconomic impact analyses in rural and remote places.

Organization

The remainder of the paper is structured as follows: first, the literature review covers background material on community resilience, the evolution of the base economic model through the ‘New West’ paradigm into the more recent theory of the ‘Three Wests,’ gateway communities, the history of West Yellowstone, the duty of the NPS and winter use management within Yellowstone National Park, and a brief legislative overview of the beginning of the winter use management debate. Chapter 2 is a stand-

alone manuscript that is formatted and structured to the specifications for submission to the *Annals of Tourism Research*. The paper explores how the winter use management debate amplified the challenges West Yellowstone is experiencing from resortification. The paper illustrates how the snowmobiling restrictions and management debate became a distraction and drained West Yellowstone of crucial community resources. Appendix A is a simplified timeline of the numerous management plans implemented during the winter use debate in YNP from the 1990s through 2013. Appendix B is a more in-depth review of the legal history of the winter use debate and formatted as a legal review. It covers the time period from the first lawsuit in the late 1990s through the publication of the 2013 Winter Use Plan by the NPS. Appendix C is an exploratory post facto analysis of the 2004 Temporary Winter Use Plan. The NPS implemented the 2004 plan to guide their management of YNP for the winters of 2005 through 2007. I collected and analyzed various economic datasets to assess the economic impact on West Yellowstone and compare the projections from the 2004 EIS to what was actually observed. Finally, Appendix D is the interview guide that informed the semi-structured interviews that I conducted with residents and business owners of West Yellowstone.

Literature Review

Community Theory

As a prerequisite to the discussion of community resilience, it is necessary to explore the different definitions of a place-based community. In an assessment of resident perception of community issues related to tourism, Williams and Lawson (2001)

utilized a definition of community as a group of people who share common opinions and goals. Another definition stresses that community is a multidimensional concept that includes family and friendship networks, formal and informal associational ties and ongoing processes of socialization (Kasarda & Janowitz, 1974). A third definition of community emphasizes the quality and type of interactions between people who identify with a certain place (Lyon & Driskell, 2011). These definitions of community share an emphasis on social interactions because it is social interactions that inform community identity and develop shared meanings for community members (Clendenning & Field, 2005; Wilkinson, 1991). This paper builds off the definitions of community that highlight social interactions to promote social networks and a shared community identity.

Community Resilience

Resilience describes the capacity of a social system to absorb impacts and respond. It is an adaptive process of continual change that facilitates mechanisms for the social system to cope with an event or disaster (Cutter, Barnes, Berry, Burton, Evans, Webb, 2008; Ross & Berkes, 2014). Resilience as an area of academic research first emerged in the field of ecology back in the 1970s (Holling, 1973), but has since spread across academic boundaries. In addition to ecology, scholars have applied resilience to such fields as engineering (Bonanno, 2004; Holling, 1996) and social sciences (Adger, 2000). The versatility of the concept has enabled it to be applied to various systems such as the environment (Gunderson, 2000), industries (Lin, 2011), and communities (Magis, 2010; Norris, Stevens, Pfefferbaum, Wyche, & Pfefferbaum, 2008). Community resilience scholars have considered resilience, the ability to buffer change, learn and

develop (Folke et al., 2002), in regards to Indigenous groups (Ross, Cuthill, Maclean, Jansen, & Witt, 2010), forest-based communities (Kelly & Bliss, 2009; Magis, 2010), natural disaster risk (Cutter, Barnes, Berry, Burton, Evans, Webb, 2008; Norris et al., 2008), and more recently, tourism (Bec et al., 2015). Applying metrics of community resilience enables a community to determine weaknesses, points of vulnerability and identify threats to the community (Smit & Wandel, 2006). Community resilience assists communities to manage those vulnerabilities (Bec et al., 2015) and has become an integral aspect of rural development and disaster preparedness as it relates to promoting life, livelihood and culture (Manyena, 2006).

Currently there is no standardized method to measure or define community resilience, but the field has several well-cited, working definitions of the term (Norris et al., 2008). Approaching resilience from the ecological and community perspective, social science professor, Kristen Magis (2010, p. 402), defines community resilience as “the existence, development, and engagement of community resources by community members to thrive in an environment characterized by change, uncertainty, unpredictability, and surprise.” Magis stresses the collective capacities of the members of a community and their ability to respond to and influence change. Supplementing Magis’ definition, Norris et al. (2008) reiterate that community resilience is not something simply achieved, but rather is a “process” that resituates a community on a “positive trajectory of functioning” after a disturbance (p. 130).

Within the tourism literature, scholars have adopted resilience to study the response of the tourism system to a short-term disaster or crisis such as a tsunami

(Cochrane, 2010) or the long-term impact of climate change (Chapin et al., 2009; Scott, Jones, & Konopek, 2007). Similarly, scholars have applied the concept of resilience to the system of communities to study the response and adaptations of communities to both long-term and short-term stressors such as natural disasters (Cutter, Barnes, Berry, Burton, Evans, Webb, 2008) or social and political changes (Adger, 2006). Joining these two strands, Farrell and Twining-Ward (2004), initiated the study of community systems as they respond to the pressures induced by tourism (Bec et al., 2015). Their work considers how a community, through the development and engagement of community resources, can adapt and cope within an environment characterized by change and uncertainty brought about by challenges of increasing or decreasing tourism. For West Yellowstone, the winter use debate introduced a great deal of uncertainty surrounding its winter tourism industry.

Given these definitions of community resilience, a social scientist's interest in resource and tourist dependent economies is understandable. Both tourism and resource dependent towns are highly specialized economies exposed to exogenous forces (Freudenburg & Gramling, 1998). Due to the dependency of West Yellowstone's economy on visitation to YNP, the National Park Service and its land managers wield great influence on the town's economic well-being (Steer & Chambers, 1998). The tourism economy employs many of West Yellowstone's residents either directly or indirectly, therefore, their livelihoods are dependent on the ability of YNP to attract visitors. This close connection makes management of YNP and potential policy modifications a community issue (Jobes, 1992).

Evaluating Community Resilience

To date, there is no standardized methodology to measure community resilience. Recently though, there have been thorough attempts to integrate the two primary perspectives of community resilience research (social-ecological systems (SES) analysis and developmental psychology) to reveal the common criteria that strengthen resilience. Drawing upon previous literature in an attempt to bridge the two fields of resilience study, Berkes & Ross (2013) concluded that the resilience of a community is comprised of: engaged governance; a diverse and engaged economy; knowledge, skills and learning; people-place connections; community infrastructure; values and beliefs; leadership; social networks; and an outlook willing to accept change (Berkes & Ross, 2013; Buikstra et al., 2010; Kulig, Hegney, Edge, Winters, & Lee, 2009; Norris et al., 2008; Ross et al., 2010). Figure 1 is a conceptual model of these nine dimensions of community resilience (Berkes & Ross, 2013).

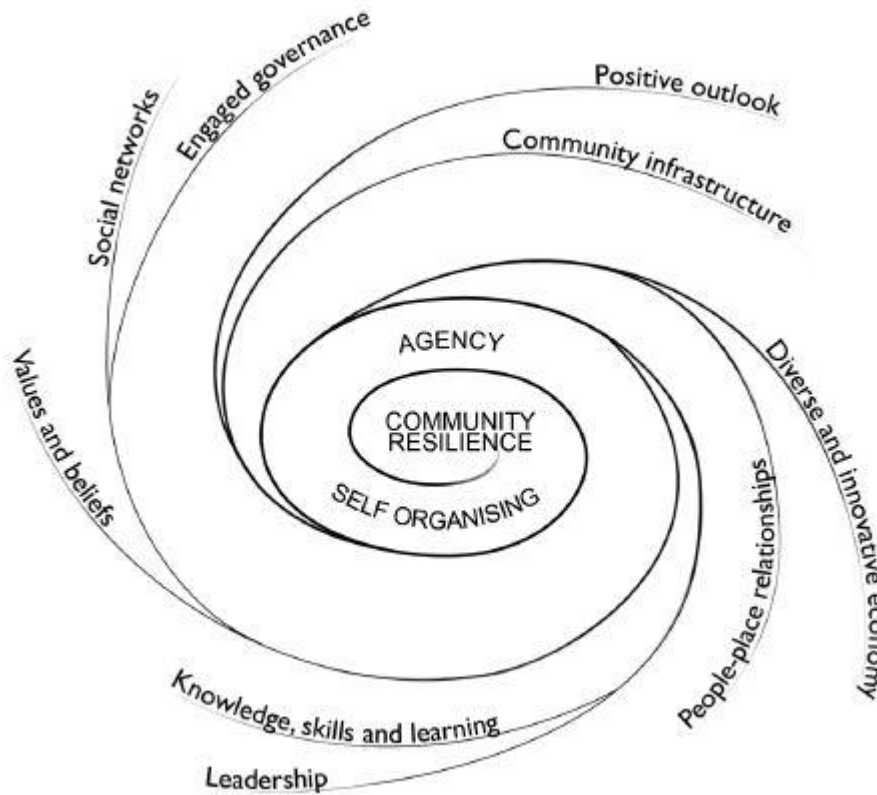


Figure 1 is copied from Berkes and Ross (2013) and shows their nine dimensions of community resilience.

Resilience scholars frequently utilize a mixed methods research design to measure the dimensions of community resilience. As Carpenter et al. (2005) noted, ‘resilience’ is an abstract term and beyond the capacity of direct observation. Therefore researchers commonly utilize interviews, case studies and secondary data in studies of community resilience (Cuthill et al., 2008; Magis, 2010; Ross & Berkes, 2014). Despite the small size of West Yellowstone (estimated population of 1,322 residents in 2014 (U.S. Census Bureau, 2015)), the national attention it received during the snowmobile debate as well as its function as a NPS gateway community has generated an extensive amount of economic data that can be applied to the purposes of this mixed methods study.

Evolution of Economic
Theory of the American West

The phenomenon of a pleasant and enjoyable place luring migrants is nothing new. In 1954, geographer Edward Ullman, discussing potential amenity migration, said “It looks as if America, given half a chance, might become a nation of sybarites. We now have this half chance” (Ullman, 1954, p. 131). Ullman was describing Americans’ post World War II mass migration to the comfortable climates of Florida and California and speculated that the numerous amenities lured many migrants rather than the traditional attraction of employment opportunities. More recently, new developments, wealth and technology, have enabled even more people to seek residence in places of comfort and pleasure.

Over the past few decades, scholars have observed an economic transition and rapid population growth in some western towns and counties. The population growth rate of the eleven contiguous states has outpaced the national average (Power & Barrett, 2001). As the U.S. Census reported, Americans are moving south and Americans are moving west. From 1990 to 2008, the western population grew by 35 percent whereas the nation’s population only grew by 22 percent (Gude, Rasker, Jones, Haggerty, & Greenwood, 2012). In addition to the natural population growth, the fastest migration rate in the 1990s boosted the population of the western region (Travis, 2007). Furthermore, in 2010 the U.S. Census Bureau projected these trends to continue as it reported that the West’s population will increase by 45.8 percent from 2000 to 2030, the highest rate of any region in the United States. In the early 1990s, economists observed that within parts of the Greater Yellowstone Area (GYA), the region’s population and

economy were rapidly transforming despite stagnant growth within the primary and secondary sectors. Economists hypothesized that the natural beauty and high quality of life that attracted tourists to the GYA also attracted entrepreneurs, decoupled business owners and retirees (Power, 1991; Rasker, Tirrell, & Kloepfer, 1992).

Along with the population growth, the economy of the western region is also booming and diversifying. From 1990 to 2008, both employment and real total personal income grew by 40 and 68 percent, topping the nation's averages of 31 and 54 percent respectively (U.S. Bureau of Economic Analysis, 2010). The recent economic growth has been attributed to the surge in service-related jobs. Jobs in health services, as well as professional and technical services have been the primary drivers of this growth (Gude et al., 2012; Power & Barrett, 2001). Enabling this economic transformation has been the ability of these knowledge-based professionals to be 'footloose' wherein they have been able to 'de-couple' from the city and factory floor and choose to live almost anywhere with decent internet connectivity and convenient airport access (Gude et al., 2012; Power, 1996; Power & Barrett, 2001; Rasker, Gude, Gude, & Van den Noort, 2009). The service occupations in which some people are employed have become footloose thanks to telecommunication advancements, transportation network improvements and a more globalized world that has allowed people to stay connected regardless their whereabouts (Beyers & Lindahl, 1996; Cromartie, 2009; Johnson & Rasker, 1995; McGranahan & Wojan, 2007).

As previously mentioned, a high number of the de-coupled and footloose migrants and businesses are choosing the West to relocate. Economists and demographers

hypothesize that the pursuit of a high quality of life derived from nearby natural and environmental amenities, can attract potential migrants. These are natural amenities in which the GYA abounds. Other important factors include easy access to air travel and an educated workforce (Rasker, 2006; Rasker & Hansen, 2000). In addition to the migrating knowledge-based services, retirees seeking fair climates, natural scenery and affordable housing have been responsible for some of the country's highest growth rates in the 1990s (Frey, 2006; McGranahan, 1999; Vias, 1999) and 2000s (Mackun, Wilson, Fischettl, & Goworowska, 2011).

More recently, some economists and demographers have moved beyond the 'New West' model and attempted to articulate the imbalances of economic geography in the American West. Rasker, for example, emphasizes the 'Three Wests' in which the economic performance of western counties are categorized by access to major population centers and markets. The Three Wests are Metropolitan, Connected or Isolated counties (Rasker et al., 2009). Though the model focuses on county-scale for classification, its definition of remoteness illustrates some of the difficulties facing West Yellowstone. The town is located within Montana's Gallatin County, a booming region of population and economic growth, but West Yellowstone is situated far from the growth of Bozeman and its convenient interstate and airport access (see Figure 1 in Chapter 2). The town operates as a node in a booming region of growth, but its status as a tourism-dependent, gateway community sets up a unique set of challenges.

Tourism, the primary driver of some gateway communities, is just one of several economic drivers powering a diversified and sustainable economy. It is an important

component of attracting footloose migrants, but other considerations include easy transportation access, telecommunication connectivity and the capacity of the local workforce. It remains less clear how tourism-dependent gateway communities, particularly those that are remote, can situate themselves to diversify their economies and promote local community resilience. The highly specialized dependence of some gateway communities on the tourism service industry may make a gateway town like West Yellowstone, despite its advanced tourism economy, prone to similar boom-bust cycles that ‘Old West’ extractive communities upon were dependent (Freudenburg, 1992). Therefore, the sudden impact of the NPS’ winter management plan strained the economy and community of West Yellowstone.

Resource Dependent Communities and the Economic Base Model

The traditional economic base model for rural development in the American West focused on the relationship between export industries and the greater economy. Previously, economists believed that ‘base’ sectors such as mining, logging, manufacturing, and agriculture brought income into the area through the exportation of their resources and raw goods (Power, 1996). Consequently, a portion of that outside income would circulate within the local area and support the non-basic businesses as a multiplier. Under the base model, researchers assessed community well-being by wage income and hypothesized that economic development occurred through increased exports (Corkran, 1996). Following expansion and settlement in the American West, generally, many small, rural towns of the western U.S. were located in a specific place to capitalize

on the local natural resource being extracted from the public land (or were situated to help transport those resources to larger urban markets (Abbott, 2008)) and were thought to operate under the economic base model (Corkran, 1996; Jobes, 1992; Power, 1996). Many of these small, remote and highly specialized extractive towns became resource-dependent gateway communities in which their livelihood depended on continuing resource extraction and were vulnerable to fluctuating commodity prices.

Numerous rural gateway communities, particularly those focused on extractive industries, have been highly susceptible to the population decreases and economic woes that other agricultural regions and extractive resource towns have been experiencing (Humphrey, 1994; Jobes, 1992; Nord, 1994). Many of these small, resource-dependent towns have been on a boom-bust cyclical path for more than a century, forcing their residents to be highly specialized within their industry and extremely vulnerable to the dynamism of the modern, globalized economy (Freudenburg, 1992; Power, 1996). During the boom years (when national or global resource prices are high), renewed or increased extractive activity is an injection of outside capital into the local economy, benefiting the community's residents. Studies have shown that extractive industries pay higher salaries and drive the population growth rate up during the boom years of production (Bender, 1985; Mills, 1995). However, the sudden financial boon incentivizes the community to maximize resource extraction which often leads to an over-specialized and highly-dependent relationship between resource extraction and local economic vitality. Freudenburg (1992) referred to these types of places as having 'addictive economies.' In addictive economies, community well-being peaks during the

boom years, but the subsequent market collapse and economic bust devastates the community and produces a nadir of community well-being.

Thomas Power, an early champion of the New West paradigm in the 1980s and 1990s, criticized the older economic base model, and called it a descriptive model that is overly simplistic. Power argued that the base model failed to predict lag times, account for unused capacities or distinguish between national versus local interests (Power, 1988). As a proponent of the New West model, Power suggested that a local economy is more sustainable if it focuses on environmental preservation of the surrounding natural amenities. This would lessen the singular dependency of the local economy on destructive resource extraction and situate the town to capitalize on the market forces of the New West model (Power, 1996). Gude et al. (2006) substantiated this hypothesis in their assessment of rural residential development in the GYA in the 1970s through the 1990s. They noted that some communities within the GYA developed after the agricultural era, but still attracted people evidently because of the natural amenities. The small towns of the GYA attracted people to them because of their unique view-sheds and recreational opportunities (Gude, Hansen, Rasker, & Maxwell, 2006). Upon visiting YNP, it became abundantly clear to tourists why our nation designated the area our first national park.

The Greater Yellowstone Area

The GYA, one of the largest and most well preserved temperate-zone ecosystems in the world, spans up to 22 million acres across the intersection of Idaho, Montana and Wyoming. At the centerpiece of this ecosystem is Yellowstone National Park,

established in 1872. It was America's first national park and today hosts millions of visitors who are drawn by the thermal hot-pools and geysers, diverse wildlife and vegetation, canyons and natural beauty (National Park Service, 2015b).

From its inception during the days when the US Cavalry was performing the duties of the yet-to-be-established NPS, visitation to YNP was concentrated over the summer months. Over time, with technological advancements and improved accessibility into the park, winter recreation in the park has increased in popularity, necessitating the NPS to develop a winter use management plan. Today, summer visitation still dominates annual statistics, but winter visitation and its impacts on the park as well as the neighboring towns, have become extremely controversial. At the center of this impassioned debate: the small gateway community of West Yellowstone.

Gateway Communities

Situated in southwestern Montana, West Yellowstone, as its name implies, abuts the western border of YNP and is a classic example of a 'gateway community.' A gateway community is a smaller town (usually less than 15,000 people) that has an economy tied to the adjacent or surrounding public lands (Kurtz, 2010). Within their definition of a gateway community, the NPS acknowledges that their own land management policies influence both the "economy and social fabric" of the adjacent community (Steer & Chambers, 1998). Gateway communities are usually rural, remote and located in non-metropolitan counties due to their proximity to large expanses of protected lands; however by definition, they are not required to be rural or remote (Kurtz, 2010).

Historically, settlers established gateway communities in geographic locations to capitalize on close proximity to public lands for natural resource extraction. The success and community well-being of gateway towns rose and fell with the boom-bust cycles of extractive economies, industries such as agriculture, mining and logging (Kurtz, 2010). Since the 1960s, public lands protection laws, resource exhaustion, reduced profitability and changes in demand and international markets have chipped away at the close link between resource extraction and gateway towns in the U.S. As a result, some gateway towns have suffered population declines and economic hardship after mines, mills and operations have ceased (Charnley et al., 2006; Kraft, 2015; Yaffee, 1997). However, others have managed to survive, shifting their economic base from resource extraction to tourism and hospitality services (Kurtz, 2010). These tourist-focused gateway towns benefit from geographic locations where travelers are most likely to stop for gas, food, supplies and souvenirs. Visitors commonly spend the night in gateway communities and use the town as their base camp from which to venture out into the neighboring national parks, forests, battlefields and monuments.

An important distinction between types of tourism-focused gateway communities is the original purpose of the town's economy when it was founded. Historically, many gateway communities were established as an outpost for resource extraction, but over time, some, such as Aspen, CO, or Moab, UT, have transitioned into economies partially, if not completely, dependent upon tourism (Kurtz, 2010). The other group is comprised of those such as Estes Park, CO, East Glacier, MT and Mackinaw City, MI, which were founded because of tourism demand (Corkran, 1996; Howe, McMahon, & Propst, 2012).

These gateway communities have economies that were always focused on providing services to tourists. Moving forward, resource extraction remains the primary economic contributor of a decreasing number of gateway communities. However, it should be noted that first, a transition from an extraction-focused economy to a tourism-based economy is not inevitable in all gateway communities and second, that a transition to an economy focused on tourism is not without its drawbacks and detractors.

Tourism: The Devil's Bargain & Resortification

Numerous towns and gateway communities have come to rely upon various types of tourism as the primary driver of their local economy. Whether it be recreational tourism (Rothman, 1998), eco-tourism (Buckley, 2004), or agri-tourism (Sznajder, Przezbórska, & Scrimgeour, 2009), scholars have observed both the costs and benefits of tourism to the surrounding host communities. Historian Hal Rothman (1998) argued vehemently against tourism as an economic lifeline and referred to the maneuver by a community to embrace tourism as the “devil’s bargain.” Rothman considered tourism, rather than the salvation for a struggling economy, to be a means to provide low-paying jobs, high real estate prices, sprawl and the erosion of a well-connected community. Drawing upon such examples as Vail, Aspen and Sun Valley, Rothman argued that these formerly small, remote towns became the focus of corporate control in which multinational corporations prioritized profit margins and pushed out the local owners and community members (Rothman, 1998). This is Rothman’s devil’s bargain: in exchange for outside capital, growth and development, a community is transformed into a

manufactured resort town in which the traditional residents can no longer afford to live and operate. Rothman's warning demonstrates that the transition of some small extractive communities to tourism-dependent towns has not been without controversy or difficulty. Local officials of tourism-dependent gateway communities have expressed concerns about dealing with traffic congestion, increasing land prices, the seasonality and quality of job opportunities, quality of life issues and a loss of community identity (Kurtz, 2010).

Hal Clifford, author of the book "*Downhill Slide: Why the Corporate Ski Industry is Bad for Skiing, Ski Towns and the Environment*," illuminated the difficulties of communities as they encounter the pressure of resortification in Rocky Mountain ski towns. (Resortification has also been referred to as the 'Aspen Effect' or 'Aspenization' in reference to the resort development in Aspen, CO (Naimark, 2006; Richey, 2010)). Clifford noted that in the pursuit to maximize profits, the multinational corporations that were buying up many ski hills throughout the United States, transformed skiing into an elitist sport that only the wealthiest tourists could afford. The corporations rewrote the mountain resort business plan to use skiing as a tool to sell real estate. Vacation homes sprang up wherever construction was possible and raised real estate prices so high as to displace the previous community members. Refabricated resort villages provided each visitor a controlled and calculated experience to extract as many dollars from each tourist as possible. Furthermore, the absentee owners who purchased the local businesses and real estate had no attachment or investment in the local community functions (Clifford, 2002).

The process of resortification has also been observed by geographer Bill Travis who noted the expanding geography of a resort town and how the sprawling amenity zone forces the low-wage service workers to do a ‘down valley shuffle’ in which they have to commute longer and longer distances as they are pushed further and further away from the resort center with ever-increasing real estate prices. Travis argued that resort towns struggle to maintain a bonded and connected community as the corporate resort culture seizes the town. Compared to year-round residents and ‘mom and pop’ stores, absentee business owners and second home owners have little incentive to become involved with the local community if only spending a small percentage of the year in town (Travis, 2007).

Another noted author and tourism antagonist, Edward Abbey, wrote of his personal experiences with the negative aspects of industrial tourism. Abbey critiqued industrial tourism as a big business of powerful, organized interests that include the lodging, dining and gasoline retailers.¹ But it only exists because the American people, operating as “wheelchair explorers,” demanded a means to access our national parks in such a way that they never had to exit their vehicles (Abbey, 1968). West Yellowstone operates as a gateway community to serve the industrial tourism machine with food and fuel and its success furthers visitor demand for an industrial tourism complex to exist within our national parks.

¹ It is important not to confuse this definition of industrial tourism with the other variety of industrial tourism that studies tourism to operational industrial sites and other places of product production in which the primary purpose is non-tourism focused (Frew, 2000).

Residents' Perception of Tourism Development

Shifting to a different body of literature, other scholars have focused on the perceptions of residents to local tourism development. Empirically, resident perceptions of local costs and benefits associated with tourism and tourism development are fickle, nuanced and contextual. Previously, work on resident perception of tourism development has focused on four independent variables of analysis: length of residence, strength of the local economy, ratio of home ownership to rental occupancy, and a residents' distance to the tourism center (Vargas-Sánchez, de los Ángeles Plaza-Mejía, & Porras-Bueno, 2009).

Conclusions regarding residents' perception of tourism development and length of residence have been contradictory (Vargas-Sánchez et al., 2009). Some studies found that the longer an individual resided in their town, the more unfavorable their feelings toward tourism (Mansfeld, 1992; McCool & Martin, 1994). Similarly, Snaith and Haley (1999) concluded that a shorter residence time corresponded to a more positive attitude towards tourism development. However, others found that new residents viewed tourism less favorably because they feared that increased tourism development would threaten the tranquility that they sought when relocating (Brougham & Butler, 1981; Faulkner & Tideswell, 1997). In a comparison of residents who owned their home versus those who rented, it was found that those who lived in a home in which they owned, were more likely to have a negative attitude towards tourism development than residents who occupied rental properties (Snaith & Haley, 1999).

Similar to the findings for length of residence, studies that evaluated the distance a resident lives from the tourist center also found mixed results. Some concluded that

living a shorter distance to the tourist zone corresponded to a more positive perception of tourism development because those living closer to the tourist center were also more likely to be economically dependent upon tourist spending (Mansfeld, 1992; Sheldon & Var, 1984). Others found the opposite that close proximity to the tourism center corresponded to a more negative attitude toward tourism due to worries of congestion, traffic, noise and losing personal access to the tourism resource (Jurowski & Gursoy, 2004; Tyrrell, 1984).

Finally and most relevant to West Yellowstone, studies show that residents view tourism more positively if as a community or individually, they have a high degree of economic dependence on tourism (Harrill, 2004; Pizam, 1978). Others found that this may be true up to a conceptual tourism threshold above which any further tourism development is viewed negatively. Smith and Krannich (1998) found this to be the case in the “tourist saturated” town of Moab, UT, where expected future increases in tourism were believed to lead to negative local social impacts. However, an important distinction is that Smith and Krannich’s study of tourism focused on rural western towns that were pivoting to tourism to diversify or save their local economy after resource exhaustion. Therefore a non-tourism dependent community and local economy existed prior to the town becoming a tourist destination. West Yellowstone never transitioned from a natural resource town to a tourist gateway; it was established by tourism for tourism.

Site Description & History:
West Yellowstone, Montana

West Yellowstone is a classic example of a tourism-dependent gateway community. The population of West Yellowstone is small, about 1,300 year-round

residents (U.S. Census Bureau, 2015) and surrounded by federally owned lands. The town's border abuts the western border of YNP (see Figure 1 in Chapter 2) and offers park visitors essentials like food, fuel and lodging before and after they enter the park. For all of YNP, the western entrance is the busiest, hosting nearly 43% of all summer visitors to YNP in 2015 (the NPS defines the summer season as April through November).

In its early days, a settlement existed at the future site of West Yellowstone because of the 1908 completion of the depot along Union Pacific's Oregon Shortline Railroad that brought tourists to the area. The first people to settle the town, carved the site out of Madison National Forest (later divided into Beaverhead-Deerlodge and Custer-Gallatin National Forests). The original town called Riverside, changed its name to West Yellowstone in 1920. The new name indicated that the residents of West Yellowstone, nearly a full century ago, recognized their connection to the park (Eagle & Eagle, 1978).

The town incorporated in 1966 and twenty years later, in January, 1986, West Yellowstone implemented a local resort tax of 3%, the first town in the state to do so (Montana Transportation and Land Use, 2016). The state of Montana has no sales tax, but it allows an optional sales tax in towns where tourism is a major sector of the local economy. Since implementation, this tax has generated a considerable amount of revenue, primarily from Yellowstone tourists, that has enabled West Yellowstone to maintain infrastructure and fund public services to help it host the over one million people that travel through their community every year (Johnson, 2004).

Originally West Yellowstone was a seasonal town that only existed from June through September when visitors were streaming into YNP (Shea, 2009). Before the advent of snowmobiling and winter recreation, in the winter months, West Yellowstone business owners boarded up their businesses until tourists returned the following summer (Eagle & Eagle, 1978). After the conclusion of World War II, interest in winter recreation expanded with the advancement of technologies allowing people to not only survive, but enjoy harsh winter conditions. Winter in YNP was ‘discovered’ by machine recreationalists in 1949 when the first oversnow vehicle entered the park (Yochim, 1999). But it wasn’t until 1963, when six snowmobiling visitors glided into Yellowstone on what, then Park Superintendent described as “...a toboggan with tracks and motor driven-powered oversnow sleds...” (Yochim, 2009). Snowmobiling in Yellowstone National Park had begun. The pleasure of experiencing Yellowstone’s winter wonderland quickly spread. By the late 1980s, well over 100,000 people were visiting YNP each winter, roughly 60% of them via snowmobile (Sacklin, Legg, Creachbaum, Hawkes, & Helfrich, 2000; Yochim, 1999). Snowmobiling proved efficient as a mode of transportation to Yellowstone’s unique geothermal resources and winter lodging facilities, but also served as an enjoyable method of recreation. The pleasure of cruising along groomed trails through the natural beauty and wildlife of YNP attracted thousands of visitors.

The invention and significant surge in snowmobiling and snowcoaches (typically enclosed vehicles riding atop the snow on tracks and skis that can transport numerous people to snow draped vistas) in and around YNP altered the seasonality of West Yellowstone’s economic base (Shea, 2009). Suddenly, West Yellowstone could cater to

the winter tourists and capitalize on the winter attraction of YNP. Winter tourism through West Yellowstone injected capital into the local economy in the months that had been the slowest and least profitable of the year. Summer tourism had always been the foundational driver of the West Yellowstone economy, but now snowmobiling had emerged to become a critical element of its winter livelihood and provided some annual balance to its tourism income (Dustin & Schneider, 2004).

Though winter visitation to YNP has increased over the past 60 years, the summer months continue to be the primary financial driver of West Yellowstone. A busy summer day in YNP can see over 25,000 people whereas the busiest day in the winter may witness 2,000 visitors (during the snowmobiling heyday throughout the 1990s) (Sacklin et al., 2000). However, snowmobilers are amongst the highest spending tourists and provide a great boost to tourism economies (ISMA, 2015; J. Duffield & Neher, 2006). Still, the imbalance between summer and winter visitation is an important consideration for the policy makers and resources managers of YNP. The NPS wants to promote use and access in the winter months, but simultaneously needs to ensure that winter visitation does not affect the ecosystem and the attractions sought by summer visitors.

Managing Yellowstone National Park

With congressional ratification in 1916, the National Park Service Organic Act, directed the NPS to "...promote and regulate the use of the Federal areas known as national parks, monuments, and reservations...by such means and measures as conform to the fundamental purpose...to conserve the scenery and the natural and historic objects and the wildlife therein and to provide for the enjoyment of the same in such manner and

by such means as will leave them unimpaired for the enjoyment of future generations,” (National Park Service, 2015b).

The ‘Organic Act,’ was originally constructed in such a manner as to leave considerable space for legislative and judicial interpretation. The Act is commonly interpreted from either a preservationist or conservationist perspective. Many NPS court cases have hinged on various interpretations of the words ‘conserve’ and ‘unimpaired’ (Dustin & Schneider, 2005). With regards to YNP, this mandate became polarizing and increasingly contentious as winter visitation to the park increased in the 1980s and 1990s. By the winter of 2001-2002, nearly 150,000 people were visiting YNP and roughly 60% of them entered via snowmobile (National Park Service, 2015c). Furthermore, over 70% of these snowmobilers had to rent their machines, providing an even greater boost to the local economies (Mansfield, Phaneuf, Johnson, & Whitmore, 2003). A new service industry was created within the gateway communities to offer snowmobile rentals and guided tours throughout the park.

However, as motorized visitation to YNP increased, environmentalists grew concerned about the compounding impacts of snowmobiles on the wildlife, landscape and serenity of YNP. A prominent journalist for High Country News captured the care-free environment that had taken hold in West Yellowstone, “... (it) resembles a beach town in Florida or Mexico during spring break: people come here to party with their toys,” (Ring, 2002, <https://www.hcn.org/issues/223/11107>). Environmental and wildlife advocacy groups expressed alarm about what they perceived to be the degradation of America’s

first national park and they were prepared to fight for the preservation of YNP and the greater ecosystem.

NPS Winter Use Management

Attempting to fulfill their duty to provide enjoyment to visitors, the NPS has historically closed 184.6 miles of the Park's paved roads and groomed them for oversnow vehicles from mid-December to mid-March (RTI, 2004). This includes the west entrance of YNP which is closed to passenger automobiles throughout the winter and only permits oversnow vehicles to enter the park through West Yellowstone.

In the 1980's, as total winter visitation to YNP quickly surpassed 100,000 people, concerns increasingly surfaced about the impacts of winter visitation. Some were concerned that the noise pollution and emissions produced by snowmobiles were affecting the wildlife of the GYA. In response, the superintendent of YNP commissioned the development of a winter use plan to guide park management. The public criticized the resulting 1990 plan saying it was too generic and not realistic. Within just three years of its publication, winter visitation surpassed the plan's maximum visitor projection for the next ten years. In the early 1990s as annual winter visitation exceeded 140,000 people, the NPS implemented the Visitor Use Management Planning Process (VUM) to highlight problems and identify goals (Yochim, 1999).

However, before the VUM participants could issue their findings, an extraordinary 1996-1997 winter pummeled YNP (Dustin & Schneider, 2004). A thick layer of ice coupled with extra heavy snowfall created dire grazing conditions for the Yellowstone bison herd. With limited food availability, bison began migrating out of the

park, some along the groomed snowmobile roads, in search of feed. Because some of Yellowstone's herd carry brucellosis, a contagious disease that would wreak havoc if transmitted to domesticated cattle, immediate action was required. To prevent any potential disease transmission, the state of Montana shot or sent to slaughter over one thousand bison, about one third of the herd (Yochim, 1999). In the aftermath of the slaughter, a wildlife advocacy group, the Fund for Animals, brought suit against the NPS. They claimed the grooming of snowmobile trails provided easy access for the bison to migrate out of the park. In the settlement of the case, the NPS agreed to write an environmental impact statement to address winter use in YNP and gather data on bison use of groomed roadways (Dustin & Schneider, 2004). Thus began nearly two decades worth of winter use controversy and litigation and for the NPS, six separate endeavors through the NEPA process.

The National Environmental Policy Act (NEPA)

The National Environmental Policy Act (NEPA) was a statute signed by President Nixon in 1969. It requires that anytime a federal agency is considering an action that will affect the "quality of the human environment," the agency must produce a detailed statement explaining its reasoning for the action (Coggins, Wilkinson, & Leshy, 2007). Today, politicians and officials know these written statements as environmental impact statements (EIS) in which the agency's conclusions are subject to public comment and judicial review. The language of NEPA requires federal agencies to take a "hard look" at any potential environmental effects of their proposed action, but the statute does not

mandate any particular results. Simply that the environmental costs must be considered and evaluated, not necessarily avoided if the beneficial values of the action outweigh the costs (Stevens, 1989).

As previously stated, as part of their court mediated settlement from their 1997 lawsuit by the Fund for Animals (amongst other environmental groups), the NPS agreed to conduct an EIS that would study the impacts of winter use in YNP. This instigated the first of six separate endeavors for the NPS through the NEPA process regarding their winter use management of YNP. Not only time consuming, NEPA documents are expensive for the government agency to conduct or contract. The U.S. Government Accountability Office determined in a 2014 report that governmental EIS contractors are on average compensated more than one million dollars for each EIS developed (Fennell, Gomez, & Lepore, 2014). For YNP, this translates into millions of taxpayer dollars spent on developing a winter use management plan. A brief overview of the winter use debate of the early 2000s is included next. For a more thorough legal history of the winter use debate, please refer to Appendix B.

After the lawsuit by the Fund for Animals, in the final days of the Clinton administration, the Department of the Interior banned snowmobiling in YNP, but the incoming Bush administration quickly reversed the restriction. Over the next several years, groups from both sides of the motorized recreation versus preservation debate brought numerous lawsuits against the NPS. As the litigation crept along, scientists collected data and studied numerous aspects of the impact of winter use on the Yellowstone ecosystem. In the early 2000s, numerous studies were published on various

aspects of winter use and the resulting impacts: the impact of snowmobiling on the stress levels of wolves and elk were investigated by Creel et al. (2002); the connection between winter road grooming and bison migration was studied by Bjornlie & Garrott (2001) and Bruggeman et al. (2006); and snowmobile emissions in YNP reported on by Bishop et al. (2001; 2006). Results were mixed or inconclusive, which forced the NPS to consult their Organic Act to determine how to provide access for the enjoyment of the Park's natural resources while simultaneously protecting the park's natural resources for the enjoyment of future generations.

In the early 2000s, when the NPS took a more active role in the winter management of YNP and began restricting snowmobiling, a decrease in visitation occurred. Initially, the restrictions severely reduced visitation, but more recently, the numbers have rebounded slightly. In the winter of 2001-2002, there were a total of 144,490 visitors and 60% of them, (87,206) were on snowmobiles (National Park Service Visitor Use Statistics, 2016). After the NPS tightened restrictions on snowmobiles, winter visitation dropped as low as 83,235 total visitors in 2004-2005 and less than 29% of them were on snowmobiles (24,049) (Duffield & Neher, 2006). Most recently, in the winter of 2014-2015, after the NPS implemented a new management plan, YNP visitation was up to nearly 104,000 people (National Park Service, 2015b). Figure 2 reveals the drop in winter visitation to YNP through the western entrance and West Yellowstone after the NPS implemented the snowmobiling restrictions.

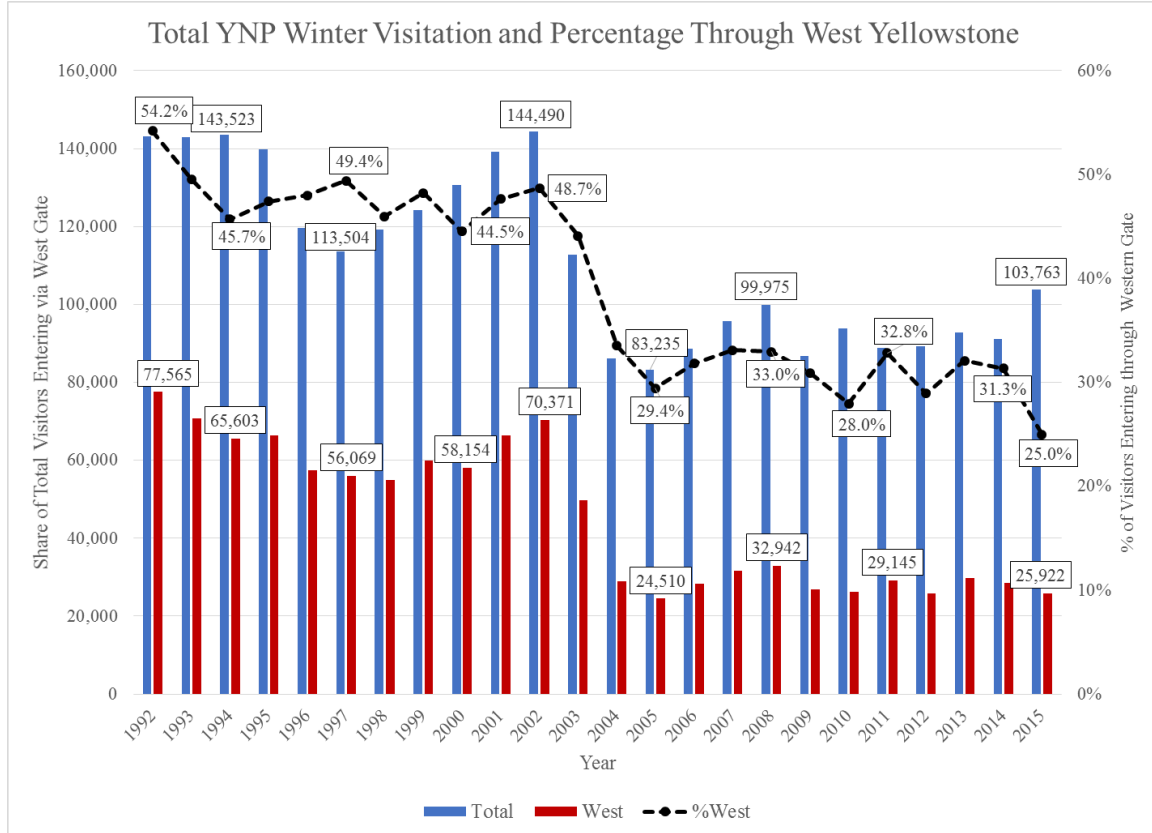


Figure 2 depicts the number of winter recreational visitors to YNP with the number and percent of total visitors (secondary axis) who entered the park through West Yellowstone and the western entrance.

A countersuit against the NPS by the International Snowmobile Manufacturers Association, resulted in a 2001 settlement directing the NPS to prepare a supplemental EIS that would consider the economic impacts of the proposed snowmobile ban, particularly on the economic livelihood of West Yellowstone (Dustin & Schneider, 2004). This ruling led to the economic data collection and impact projections that were published in the 2004 Temporary Rule. The data collected and projections published in the 2004 Rule enabled the post facto analysis that is included in Appendix C.

Conclusion

Tourism can assume a role as an important driver of economic growth and has become a critical component of attracting footloose migrants, but less clear is how tourism-dependent gateway communities promote resilience in the face of increasing resortification and industrial tourism. The highly specialized dependence of some gateway communities on the tourism service industry may make a gateway town such as West Yellowstone, MT, vulnerable to similar boom-bust cycles that 'Old West' extractive communities upon were dependent. In the case study of West Yellowstone, the rapid socioeconomic shock of the winter use debate strained the resilience of the community. The paper considers how the snowmobiling restrictions and winter use management uncertainty affected the tourist-dependent town of West Yellowstone. It explores how some of the challenges of resortification, of increasing seasonality and absentee business ownership, diminished the community resilience of West Yellowstone. Investigating the challenges of a resort town as they apply to West Yellowstone highlight the vulnerabilities of the community and provide insight to the issues the gateway community is currently facing. Still unclear is how gateway towns, which can be classic examples of the risks of economic specialization and tourism dependence, can prosper in an increasingly globalized world filled with both market competition and economic opportunities.

West Yellowstone, a classic gateway community, serves as a case study for other gateway communities that are also highly dependent upon tourism and susceptible to federal land management. As a small, remote town, the experiences of West Yellowstone

can inform other rural communities of similar geography and economics. As part of the research, I conducted an exploratory post facto analysis of the effects of the NPS's Yellowstone winter use management plan on the economy of West Yellowstone in order to gain insight into the economic resilience of West Yellowstone as a tourism-dependent town. The analysis highlights knowledge gaps that the NPS and gateway communities can consider in future environmental assessments.

CHAPTER TWO

COMMUNITY RESILIENCE
IN A TOURIST TOWN

Contribution of Authors and Co-Authors

Manuscript in Chapter 2

Author: Carl A. Hamming

Contributions: Chose the study site and implemented the study design. Conducted the interviews, as well as collected and analyzed the data. Wrote the original drafts of the manuscript.

Co-Author: Dr. Julia H. Haggerty

Contributions: Helped conceive the study and co-developed the background theory of the manuscript. Delivered feedback and assistance on the early drafts of the manuscript.

Co-Author: Dr. Ray Rasker

Contributions: Offered feedback and assistance on early analysis, figures and framework of the manuscript. Also delivered feedback and edits on an early draft of the manuscript.

Co-Author: Dr. William Wyckoff

Contributions: Produced feedback on the study and comments on the manuscript.

Manuscript Information Page

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Annals of Tourism Research

Status of Manuscript:

Prepared for submission to a peer-reviewed journal

Officially submitted to a peer-review journal

Accepted by a peer-reviewed journal

Published in a peer-reviewed journal

Published by Elsevier

GATEWAY COMMUNITY: DECLINE OF COMMUNITY RESILIENCE

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ABSTRACT: This study explores the socioeconomic impacts of the National Park Service's winter use management of Yellowstone National Park on the gateway community of West Yellowstone, Montana. As a highly specialized, tourism-dependent gateway community, the National Park Service's management decisions that affect park visitation also impact the economic viability of West Yellowstone. Previously, scholars have documented the challenges presented by tourism economies and 'resortification' in small communities, the process of a small town being converted into a resort destination with numerous vacation properties, increasing absentee business ownership, a highly seasonal economy and escalating real estate prices. Less is known about how the challenges of resortification and industrial tourism interact with the dimensions of community resilience within a gateway community. Community resilience exists as a mechanism for rural and remote communities to identify vulnerabilities, buffer change, develop resources and promote local progress during periods of uncertainty and stress. This paper explores how the snowmobiling restrictions and winter use management of Yellowstone National Park impacted the community resilience of the tourism-dependent gateway community of West Yellowstone. The debate over winter use management and snowmobiling restrictions in Yellowstone National Park drained the community resources of West Yellowstone and negatively impacted the economic viability of local wintertime businesses. Consequently, challenges of resortification intensified and diminished several dimensions of West Yellowstone's community resilience. The mixed methods approach provides insight to how West Yellowstone's social and economic well-being have been affected since the snowmobiling restrictions were implemented and how the tourism landscape of the entire Yellowstone region has changed. The case study of West Yellowstone contributes knowledge of the economics of gateway communities, the implications of federal land management decisions, and the community resilience of tourism-dependent, gateway towns.

"The schoolkids run around like feral animals because there is nothing for them to do and no place for them to go after school. This is not a community, it's a resort." – West Yellowstone resident

1. INTRODUCTION

West Yellowstone, Montana, is a classic example of a tourist gateway community. Gateway communities are typically small, remote towns with an economy dependent upon a geographic location near public lands (Kurtz 2010; Frauman and Banks 2011). Millions of tourists flow through the streets of West Yellowstone every year on their way in and out of the west entrance of the iconic Yellowstone National Park (YNP). Over time, West Yellowstone developed a highly specialized economy dependent upon visitation to YNP. Therefore a key concern of West Yellowstone is the influence of national land management policy as it relates to the operation of YNP. This paper studies how the National Park Service's decision to limit winter use and restrict snowmobiling in YNP affected the gateway community of West Yellowstone, the 'Snowmobile Capital of the World' (Dustin & Schneider, 2004; Ring, 2002). From 2000 through 2013, the National Park Service issued six different winter use management plans that ranged in daily snowmobile quotas and mandatory standards for snowmobiles with low-emission technology. Initially, a complete ban on snowmobiling in the park was to be implemented in 2001, but the restriction was quickly reversed and the issue moved to the federal court system. Since the winter of 2003, different limitations and daily quotas of snowmobilers have caused an immediate and lasting impact on winter visitation to YNP. The term 'winter use restrictions' refers to the numerous management changes and reversals that created great uncertainty for nearby snowmobile rental businesses as well as destination tourists interested in traveling to YNP. Situated within this research is how

West Yellowstone's experiences illuminate previously unexplored dimensions of tourism impacts and economic geography of the American West.

As long as it has existed, West Yellowstone has been a small, remote gateway community with a highly specialized service industry dependent upon tourism. The high dependence of the town on a single economic driver leaves it vulnerable to external forces that determine the economic success of West Yellowstone as a gateway community to YNP. A new conceptual framework is introduced that posits that increasing dependence on industrial tourism² can lead a gateway community to increasingly encounter the challenges of a resort town characterized by a seasonal economy, low-wage service jobs, second homeownership and absentee corporate business ownership. This paper studies how the YNP winter use restrictions heightened West Yellowstone's vulnerability to the resortification process thereby straining and diminishing the community resilience of the town. The term resortification captures the effect of a previously small community transitioning into a resort destination with sprawling vacation communities, increasing absentee business ownership, a highly seasonal economy and escalating real estate prices (Naimark, 2006; Paradis, 2000; Travis, 2007). As a classic tourism-dependent gateway community, West Yellowstone serves as a case study for other gateway communities that are also highly dependent upon tourism and susceptible to the politics of federal land management.

² In this paper, the term industrial tourism refers to author Edward Abbey's definition of industrial tourism as the big businesses of powerful, organized interests that include the lodging, dining and gasoline retailers who cater to tourists' demand for easy and comfortable access to national parks and forests (Abbey, 1968). This definition of industrial tourism should not be confused with the alternative definition that refers to tourism to operational industrial sites and places of product production (Frew, 2000).

1.1 Purpose

The highly specialized dependence of some gateway communities on tourism make a gateway town like West Yellowstone, MT, vulnerable to weakened dimensions of community resilience as it increasingly encounters the challenges of a resort town. As an emerging topic in the academic tourism literature, gaps remain in the current research of community resilience within gateway communities (Bec, McLennan, & Moyle, 2015). This paper explores how the YNP snowmobiling restrictions impacted the community resilience of the tourism-dependent gateway community of West Yellowstone, MT. As the ‘Snowmobile Capital of the World,’ the snowmobiling restrictions in YNP had a socioeconomic impact on West Yellowstone. Subsequently, the impacts amplified the challenges of functioning as a tourism-dependent gateway community and diminished the community resilience of West Yellowstone. Though the snowmobiling restrictions implemented by the NPS were just one of several factors impinging on the snowmobiling market of West Yellowstone, some residents still perceive the NPS and their winter management as the primary cause of their depressed winter economy.

The literature review, included next, covers two topics: community resilience and resident attitudes towards tourism development. The methods section follows and includes a site description of West Yellowstone and a brief history of NPS winter use management in YNP. Next, the discussion section assesses resortification and community resilience through the qualitative and quantitative data that we collected. The discussion also highlights current opportunities and challenges facing West Yellowstone.

Finally, the conclusion section summarizes the findings and offers recommendations for future study of community resilience in tourism-dependent, gateway towns.

2. LITERATURE REVIEW

2.1 Community Resilience

Resilience describes the capacity of a social system to absorb impacts and respond. It is an adaptive process of continual change that facilitates mechanisms for the social system to cope with an event or disaster (Cutter, Barnes, Berry, Burton, Evans, Webb, 2008; Ross & Berkes, 2014). Resilience as an area of academic research first emerged in the field of ecology in the 1970s (Holling, 1973), but has since spread across academic boundaries. In addition to ecology, fields such as engineering (Bonanno, 2004; Holling, 1996) and social sciences (Adger, 2000) have also pursued resilience research. The versatility of the concept has enabled it to be applied to various systems such as the environment (Gunderson, 2000), industries (Lin, 2011), and communities (Magis, 2010; Norris, Stevens, Pfefferbaum, Wyche, & Pfefferbaum, 2008). Community resilience scholars have considered resilience, the ability to buffer change, learn and develop (Folke et al., 2002), in regards to Indigenous groups (Ross, Cuthill, Maclean, Jansen, & Witt, 2010), forest-based communities (Kelly & Bliss, 2009; Magis, 2010), natural disaster risk (Cutter, Barnes, Berry, Burton, Evans, Webb, 2008; Norris et al., 2008) and more recently, tourism (Bec et al., 2015). Applying metrics of community resilience enables a system to determine weaknesses, points of vulnerability and identify threats to the community (Smit & Wandel, 2006). Community resilience assists communities to manage vulnerabilities (Bec et al., 2015) and has become an integral aspect of rural

development and disaster preparedness as it relates to promoting life, livelihood and culture (Manyena, 2006).

Tourism scholars have recently adopted resilience in order to study the response of the tourism system to a short-term disaster or crisis such as a tsunami (Cochrane, 2010) or the long-term impact of climate change (Chapin et al., 2009; Scott, Jones, & Konopek, 2007). Similarly, they have also applied the concept of resilience to the system of communities to study the response and adaptations of communities to both long-term and short-term stressors such as natural disasters (Cutter, Barnes, Berry, Burton, Evans, Webb, 2008) or social and political changes (Adger, 2006). Joining these two strands, Farrell and Twining-Ward (2004), adopted and applied the concept of community system response to the pressures introduced by tourism (Bec et al., 2015). Their work investigates how a community, through the development and engagement of community resources, can adapt and prosper within an environment characterized by change and uncertainty. The extensive litigation and numerous winter management reversals caused similar uncertainty for the community members and businesses of West Yellowstone.

This study focuses on how socioeconomic changes brought about by the winter use restrictions interacted with the community resilience of West Yellowstone. In their work on local resident perceptions of tourism, Williams and Lawson (2001) utilized a definition of community as a group of people who share common opinions and goals. An alternative definition of community emphasizes the quality and type of interactions between people who identify with a certain place (Lyon & Driskell, 2011). They wrote

that social interactions amongst community members are crucial for residents to develop shared meanings and values (Clendenning & Field, 2005; Wilkinson, 1991).

Though definitions for community resilience vary, generally, the term refers to a place-based community dealing with change or adversity (Berkes & Ross, 2013) and adapting in such a way to return the community towards a more desirable trajectory (Adger, 2000). A special session of focus groups at the U.S. Roundtable on Sustainable Forests developed the following definition for community resilience: “the existence, development, and engagement of community resources by community members to thrive in an environment characterized by change, uncertainty, unpredictability, and surprise” (Magis, 2010, p. 402). This definition stresses the collective capacities of the members of a community and their ability to respond to and influence change. Such a framing of community resilience, with its emphasis on a well-connected community of involved and engaged citizens that share a community identity and concern for their mutual quality of life, echoes and refines many themes in rural sociology (Flora, Flora, & Gasteyer, 2016; Freudenberg & Jones, 1991).

2.2 Tourism Economies: Economic Benefits and Community Costs

Since settlement, West Yellowstone has been a tourism-dependent gateway community of locally owned establishments and a closely-knit community (Shea, 2009). However, over the past two decades, the town has been struggling against some of the manifestations of resortification and industrial tourism to maintain a shared community identity. As absentee business and homeowners control a greater share of real estate, the winter economy struggles, and the town is becoming increasingly reliant on summer

tourism to power the economy. Several scholars have observed and described the community challenges associated with resortification and an economy dependent upon seasonal tourism.

In his book about the ski towns of the Rocky Mountains *Downhill Slide: Why the Corporate Ski Industry is Bad for Skiing, Ski Towns and the Environment*, author Hal Clifford (2002) argued that resortification created difficulties for mountain communities as corporations robbed the local community of their agency. Clifford's critique focused on the transformative role of outside capital. He claimed that profit-seeking, multinational corporations purchased many of the ski resort destinations and made skiing and resort real estate unaffordable for the general public. The corporations rewrote the mountain resort business plan and used skiing as a tool to sell real estate. Wherever construction was possible in resort destinations such as Vail, Sun Valley and Mammoth Lakes, massive condo complexes and vacation homes sprang up and consequently gentrified the mountain community and displaced the previous residents. The corporations refabricated the villages to provide each visitor a controlled and calculated experience akin to Disneyland to maximize the profit extracted from each tourist. Clifford argued that the absentee owners who purchased the local businesses and real estate had no attachment or investment in the local community (Clifford, 2002).

Building on Clifford's critique, other studies have considered dynamics and outcomes of resortification. In his book, *New Geographies of the American West: Land use and the changing patterns of place*, geographer Bill Travis documented how the sprawling amenity zone forced low-wage service workers to do a 'down valley shuffle' in

which they had to commute longer and longer distances as increasing real estate prices pushed them further and further away from the resort center. Travis observed that in resort towns that had a growing corporate culture, they struggled to maintain a socially bonded and connected community. Compared to year-round residents and ‘mom and pop’ stores, absentee business owners and second home owners have little incentive to become involved within the local community because they only spend a small percentage of the year in town (Travis, 2007). The work of Clendenning and Field (2005) support this conclusion who found that for seasonal home owners, the actual use of their secondary home, not the length of residence, is most associated with community attachment and local participation.

Historian Hal Rothman argued vehemently against tourism as an ideal economic driver and referred it as the “devil’s bargain.” Rather than the salvation for a struggling economy, Rothman viewed tourism as the creator of low-paying jobs, high real estate prices, sprawl and the erosion of a well-connected community. In exchange for outside capital, growth and development, tourism transforms communities into places where the traditional residents can no longer afford to live and operate (Rothman, 1998).

Rothman’s warning demonstrates that small communities transitioning to a tourism economy face difficulties. For example, local officials of tourism-dependent gateway communities have expressed concerns regarding traffic congestion, increasing land prices, the seasonality and quality of job opportunities, quality of life issues, and loss of community identity (Kurtz, 2010). These issues are closely in line with what West Yellowstone has experienced over the past two decades. Although West Yellowstone

remains a small gateway community and is not a resort destination like Aspen, CO, some resortification challenges have affected and burdened the community. West Yellowstone's seasonal economy, job quality, and absentee ownership are all current concerns of its community members.

2.3 Local Perceptions of Tourism

Local residents of burgeoning tourism towns have expressed concerns that over-dependence on tourism impinges on their community attachment and quality of life. Previously, work on resident perception of tourism development has focused on four independent variables of analysis: length of residence, strength of local economy, ratio of home owners to rental home occupants, and residents' proximity to the tourism center (to evaluate amount of social contact with tourists) (Vargas-Sánchez, de los Ángeles Plaza-Mejía, & Porrás-Bueno, 2009). Residents and officials of West Yellowstone touched upon all four of these factors during their interviews, therefore a brief summary of the literature discussing each of the variables is included next.

Conclusions regarding the influence of length of residence as it relates to an individual's attitude towards tourism development are inconclusive and contradictory (Duffield & Long, 1981; McCool & Martin, 1994; Snaith & Haley, 1999; Vargas-Sánchez et al., 2009). The variable of property ownership, which compares residents who own their homes against those who occupy rental properties, illustrates that homeowners view tourism more negatively than the renters (Snaith & Haley, 1999). Geographic proximity of residents and their attitude towards tourism is also mixed. Some studies find that living a shorter distance from the tourist zone corresponds to a

more positive perception of tourism development because those living closer to the tourist center are more likely to be economically dependent upon tourist spending (Mansfeld, 1992; Sheldon & Var, 1984). Others suggest that close proximity to the tourism center creates a more negative attitude toward tourism because of frustrations with congestion, traffic, noise and losing personal access to the tourism resource (Jurowski & Gursoy, 2004; Tyrrell, 1984).

Finally and most relevant to West Yellowstone, some scholars agree that residents view tourism more positively if, as a community or individually, they are highly dependent on tourism (Harrill, 2004; Pizam, 1978). Others claim that this may be true up to a conceptual threshold above which residents view any further tourism development negatively. Smith and Krannich (1998) found this to be the case in the “tourist saturated” town of Moab, UT, where residents feared projected increases in tourism would lead to negative social impacts in the future (p. 792). An important distinction, however, is that Smith and Krannich’s study of tourism focused on rural western towns that favored tourism in order to diversify or save their local economy after resource exhaustion. Therefore a non-tourism dependent community existed prior to the town becoming a tourist destination or gateway. West Yellowstone never transitioned from a natural resource town to a tourist gateway; it was established by tourism for tourism (Shea, 2009).

Besides the challenges, increased tourism has introduced financial benefits to many communities. Several sectors of local industry, including outfitting, concessionaires, real estate and construction, typically experience a boost as tourism

expands. The manifestations of increased tourism and resortification however, have challenged the abilities of small communities to maintain resilience and manage the changes. Specifically, West Yellowstone has struggled to promote community resilience and a well-connected social network in the face of increasing corporate ownership and a seasonal economy. This study utilized several economic indicators and qualitative insights to explore the amplification of several challenges from resortification in West Yellowstone.

3. METHODS

3.1 Community Resilience

This study employed a mixed methods research design to explore connections linking the socioeconomic effects of YNP winter use management and West Yellowstone's community resilience. Community resilience scholarship has produced a number of survey instruments and other toolkits to assess community resilience, typically for the purposes of understanding vulnerability to natural hazards (Brown & Westaway, 2011; Cutter, Boruff, & Shirley, 2003; Norris et al., 2008; Sherrieb, Norris, & Galea, 2010). Mixed methods and in-depth interviews have yielded information regarding leadership, problem solving, social resilience (Ross & Berkes, 2014) as well as social capital, community competence and economic development (Pfefferbaum et al., 2013; Sherrieb et al., 2010). In-depth interviews have also helped communities identify potential threats and points of vulnerability in which to dedicate community resources (Smit & Wandel, 2006). For this reason, this research combined longitudinal economic

data and in-depth, semi-structured interviews with long-time West Yellowstone residents to consider changes in dimensions of community resilience over time.

To assess changes in West Yellowstone's community resilience, we questioned residents about their perceptions of local socioeconomic impacts from the snowmobiling restrictions in YNP and the uncertainty created by numerous winter use management plans. After an exploratory interview period, we conducted thirteen semi-structured interviews in the winter of 2016 with West Yellowstone business owners, hotel owners, local government officials, chamber of commerce employees, local historic center personnel, town consultants and seasonal service industry employees. During the purposive sampling selection, we prioritized residents who had winter experience in West Yellowstone prior to the snowmobiling restrictions of 2003. We then transcribed the interviews notes and analyzed them through a grounded theory approach (Glaser & Strauss, 2009).

In order to assess changes in the perceived community resilience of West Yellowstone, the interview questionnaire focused on three common and non-exclusive dimensions of community resilience: impact, equity and development of community resources (Magis, 2010). We chose these three dimensions because of their applicability to West Yellowstone's experience and accessibility through direct interview questions. (1) The impact dimension evaluates the degree to which a community is able to embrace change or a crisis as an opportunity to develop a new trajectory of success (Magis, 2010; Norris et al., 2008). To investigate impact, we asked residents how community collaboration and community resources had changed since the winter use restrictions,

specifically if they developed and implemented a community-centered plan (Magis, 2010). (2) Equity, meanwhile, ensures that residents have equal opportunity and access to engage local resources, things such as their social, political and financial capital (Magis, 2010; Ross & Berkes, 2014). We asked interviewees about their personal response and attitude toward the winter use restrictions and the involved stakeholders (such as the NPS). (3) Finally, local resource development enables a community to increase its capacity to respond to stress, crisis and change. We questioned residents about how they engaged and developed community resources and if they were attempting to keep things the same or if they were trying to find a new way to operate (Magis, 2010). Questions asked residents about their perception of the quality of local schools and if they thought citizens felt compelled to engage as active citizens within the community. Finally, we investigated if new businesses were established and if new employment opportunities were being created and developed by local residents.

3.2 Resortification

Previous literature (Clifford, 2002; Naimark, 2006; Richey, 2010; Riebsame, Gosnell, & Theobald, 1996; Taylor, 2004; Travis, 2007) has identified and documented the challenges of resortification. Principle among these challenges are: congestion, sprawl, seasonal homeownership, seasonality of the economy, quality of jobs, and increasing absentee business ownership by major corporations. Despite these inroads into developing an understanding of resortification, none of these researchers have applied quantitative metrics to a case study.

This study used four quantitative data sources in conjunction with the interviews to assess the economic well-being of West Yellowstone. Table 1 details the secondary datasets along with their source and purpose. Together, the data offer insight into the seasonality of West Yellowstone's economy, overall visitation trends for YNP and the western entrance, trends of the local economy, and the economic impact of the winter use restrictions on West Yellowstone. These data also informed the interviews and provided points of comparison for residents' perceptions.

Table 1. Overview of Quantitative Datasets

Topic	Source	Time Covered	Purpose
NPS Visitation	NPS	Monthly since 1992; includes gate and mode of transport	The number of people who traveled through the town of West Yellowstone and had an opportunity to spend money in the gateway community. Also used to compute economic benefits to gateway communities as well as inform NPS management policies (Loomis, 2002; Stynes, Propst, Chang, & Sun, 2000).
Bed Taxes	ITRR ³	Quarterly since 1988	The 4% bed tax collections of West Yellowstone act as a proxy for the number of visitors who rented a room and offers insight to the seasonality of the tourism economy (Mak, 2006).
Resort Taxes	West Yellowstone Government	Monthly figures from 1986 through 2015	The 3% monthly tax collections represent the amount of local spending that occurred within city limits and are a useful proxy for tourism activity within a small community (Andereck & Nyaupane, 2011; Di Stefano, 2004).
NETS	MSU ⁴ Subscription	1990-2012	The annual revenue data enables a time series analysis at the small scale of West Yellowstone. The NETS data enabled an analysis of the relationship between YNP visitation and West Yellowstone service sectors over time (Fleming & Goetz, 2011; Neumark, Wall, & Zhang, 2011).

Table 1 describes the source and value of each of the four quantitative datasets utilized in this study.

The National Establishment Time Series (NETS) is a database that contains records on employment, estimated sales, location, industry, and founding year for

³ University of Montana's Institute on Tourism & Recreation Research

⁴ Montana State University

approximately 52.4 million firms in the U.S. between the years of 1990 to 2012. The current database is based on 23 ‘snapshots’ taken every January of the Dun & Bradstreet data and reflects the estimated economic activity of the previous year. Businesses have an incentive to report their financial information to D&B for creditworthiness purposes (Walls, 2007). When annual revenue is unavailable for an establishment, Walls & Associates (the creators of the database), produce an estimated value based on the average sales per employee of each industry. A limitation of the data occurs when a firm’s employment is unknown and Walls & Associates must estimate the value. Policy organizations and academic groups have utilized the NETS database (Currie, DellaVigna, Moretti, & Pathania, 2010; Fleming & Goetz, 2011; Neumark et al., 2011; Walls, 2007) to illustrate trends in various industries and sectors of high growth. Though the employment and revenue figures may not precisely match the reality in West Yellowstone, the longitudinal database still provides insight to the economic trends of the town.

3.3 Site Description: West Yellowstone, Montana

The Greater Yellowstone Ecosystem, one of the largest and most well preserved temperate-zone ecosystems in the world, spans up to 22 million acres across the intersection of Idaho, Montana and Wyoming. At the centerpiece of this ecosystem is YNP, America’s first national park established in 1872. Every year, drawn by the thermal hot-pools and geysers, diverse wildlife and vegetation, canyons and natural beauty, YNP hosts millions of visitors from all over the world (National Park Service, 2015b). In 2015, the five entrances of YNP received over 4 million visitors (see Figure

1). Nestled in the southern tip of Gallatin County, MT, is the small gateway community of West Yellowstone. Bordering the western boundary of the park, West Yellowstone has about 1,300 year-round residents (U.S. Census Bureau, 2015). Despite its small size, West Yellowstone is the busiest gateway community of YNP as it hosted over 1.7 million visitors in 2015, nearly 43% of all park visitors (National Park Service, 2016).

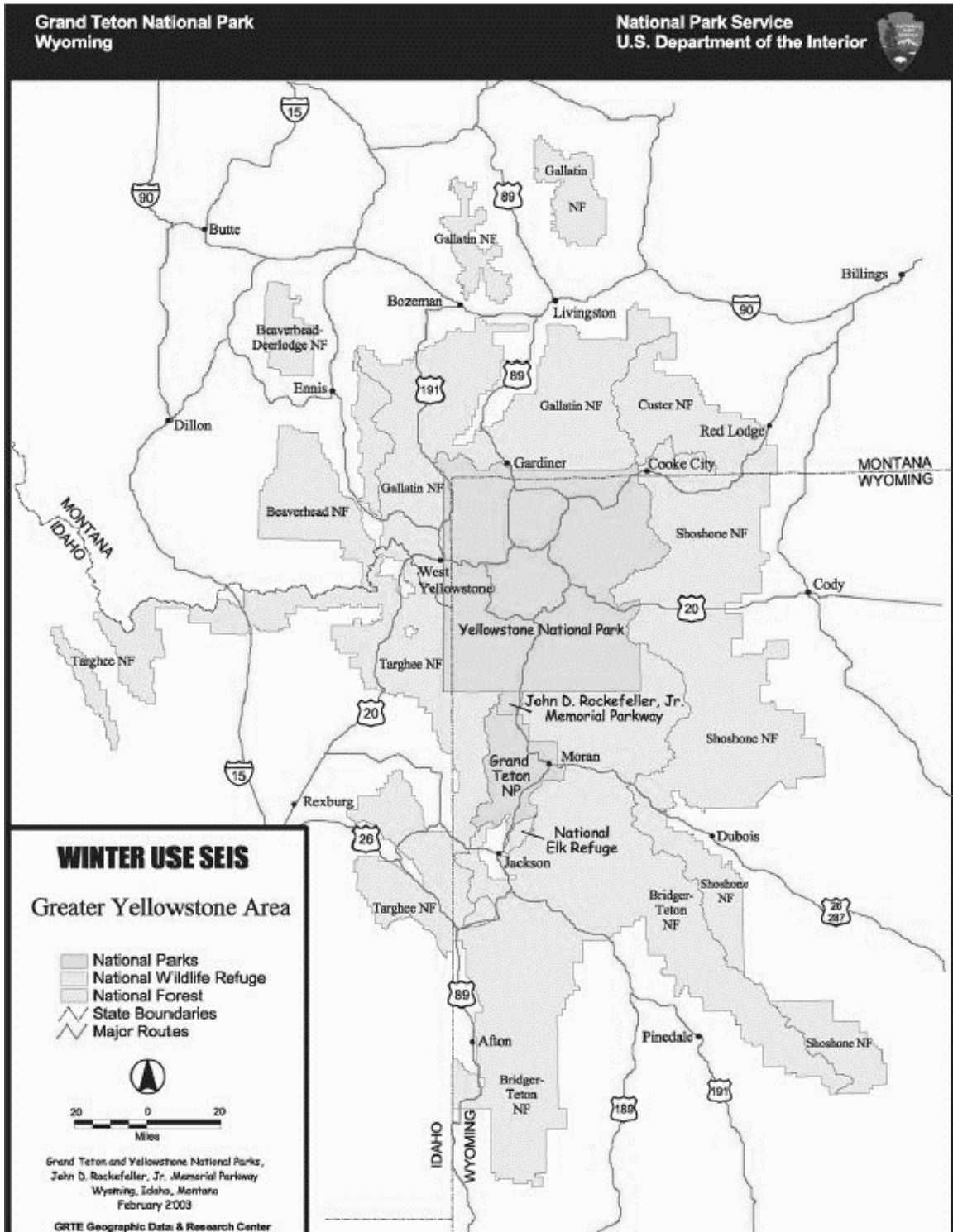


Figure 1 is a NPS map of the Greater Yellowstone Area. Public land surrounds the gateway community of West Yellowstone with YNP to the east and National Forests to the north and south (RTI, 2004).

Visitation to YNP, the driver of West Yellowstone's economy, is subject to the management decisions of two outlying governmental agencies. West Yellowstone is beyond the jurisdictional boundaries of YNP, but the consequences of NPS management decisions spread well beyond the borders of YNP (Dilsaver & Wyckoff, 2005; Yochim, 2009). The sixteen day federal government shutdown in October of 2013, for example, closed every unit of the NPS and decreased nationwide visitation by an estimated 7.88 million tourists. The shutdown resulted in a nationwide loss of \$414 million from visitor spending in gateway communities (Koontz & Meldrum, 2014). Though the NPS definition for a gateway community includes recognition that their management policies influence the economies of surrounding gateway communities, the NPS is not required to coordinate with gateway communities to support them (Steer & Chambers, 1998). In addition to the YNP, Custer-Gallatin National Forest, managed by the US Forest Service of the Department of Agriculture, also surrounds West Yellowstone. The Forest Service maintains hundreds of miles of hiking and snowmobiling trails accessible from West Yellowstone all of which are additional attractions for tourists. Furthermore, as part of one of the world's iconic preserved ecosystems, West Yellowstone is located within a hotbed of environmental advocacy. A 2011 report on the GYA found that 183 nonprofit, conservation groups were operating within the area and two-thirds of them were founded after 1986 (Cherney, 2011). Some of these groups became important actors during the nationwide debate concerning snowmobile use in YNP and their influence affected NPS policy outcomes. All of these governmental agencies and non-governmental

organizations shape and influence the politics, management and visitation to YNP and the GYA.

3.4 Snowmobiling History for YNP

It was nearly a full century after the establishment of YNP that motorized winter recreation began. In 1963, the first six snowmobiling visitors glided into YNP atop an early version of a snowmobile (Yochim, 2009) and then eight winters later, in 1971, the NPS began grooming the park roads for snowmobiles and snowcoaches (National Park Service, 2015a). Prior to the decision to groom the roads, however, a debate waged as to whether the NPS should plow or groom all of the park's roads throughout the entire winter. The winter use management debate originated back in 1967 when the US Congress held hearings to discuss the matter (National Park Service, 2015a).

Historically, nearly all visitation to YNP has occurred between May and October (Shea, 2009; National Park Service Visitor Use Statistics, 2016). With technological advancements and the NPS decision to groom the roads, the popularity of snowmobiling has soared because it provides both a recreational thrill and an easy mode of transportation to visit Yellowstone's features in the winter (Cherney, 2011; Yochim, 2009). By the late 1980s, over 100,000 people were visiting YNP in the winter (defined by the NPS as December through March) and roughly 60% of them were entering via snowmobile (National Park Service Visitor Use Statistics, 2016; Yochim, 2009).

As the popularity of snowmobiling in YNP grew, West Yellowstone embraced the activity and permitted snowmobilers to cruise its unplowed city streets. The gateway town quickly emerged as the most utilized staging area for snowmobiling into YNP and

sent the largest number of machines into the park on a daily basis (Dustin & Schneider, 2004; Ring, 2002). Snowmobile rental companies and snowcoach tour businesses sprang up and transformed the local economy. Prior to the rise of snowmobiling in the 1970s, West Yellowstone business owners had boarded up their windows and shutdown for the winter months, but increasing wintertime visitation led to a burgeoning industry servicing winter tourists and provided a degree of balance to the annual tourism economy (Shea, 2009; Yochim, 2009).

Rising scrutiny from the environmental community, however, paralleled the increase in winter visitation. Environmental and wildlife advocacy groups, raised concerns about the noise and air pollution of snowmobiles in the wild areas of YNP. Some of these groups broadcast notorious photos of park rangers strapped with gas masks attempting to escape the smog, snowmobilers zipping past bison and massive snowmobiling parties staged at YNP's iconic Old Faithful. Disagreement between the environmental groups and the snowmobiling proponents thrust the NPS into the middle of the conflict. Then, in the final days of the Clinton administration in 2001, the Department of the Interior banned all snowmobiles from YNP. Snowmobile proponents quickly attacked the closure and the incoming Bush administration eventually reversed the restrictions (Duncan, 2012; Yochim, 2009). From 2001 through 2013, the NPS tried unsuccessfully to appease both sides of the winter use debate through development of a management compromise that would balance recreational access and resource protection. During this period, the NPS published numerous winter use management plans that varied in severity of snowmobiling restrictions and limitations (National Park Service,

2015a), but each new plan implemented contained some degree of snowmobiling restrictions. Rather than reconciliation, however, the debate brought uncertainty, confusion and stress to the gateway communities and their tourism businesses. In the winter of 2003-2004, the NPS used two conflicting management plans at different times throughout the same winter and threw the winter tourism industry serving YNP into a state of stress from the management restrictions and uncertainty.

Figure 2 shows the effect of the snowmobiling restrictions on winter visitation to YNP as well as the decrease in share of visitors entering the park through West Yellowstone. Figure 2 also illustrates that there was a dip in winter visitation in the 1990s, but West Yellowstone's winter economy was still growing during this time as it continued to collect an increasing amount of winter resort taxes each year (Figure 3).

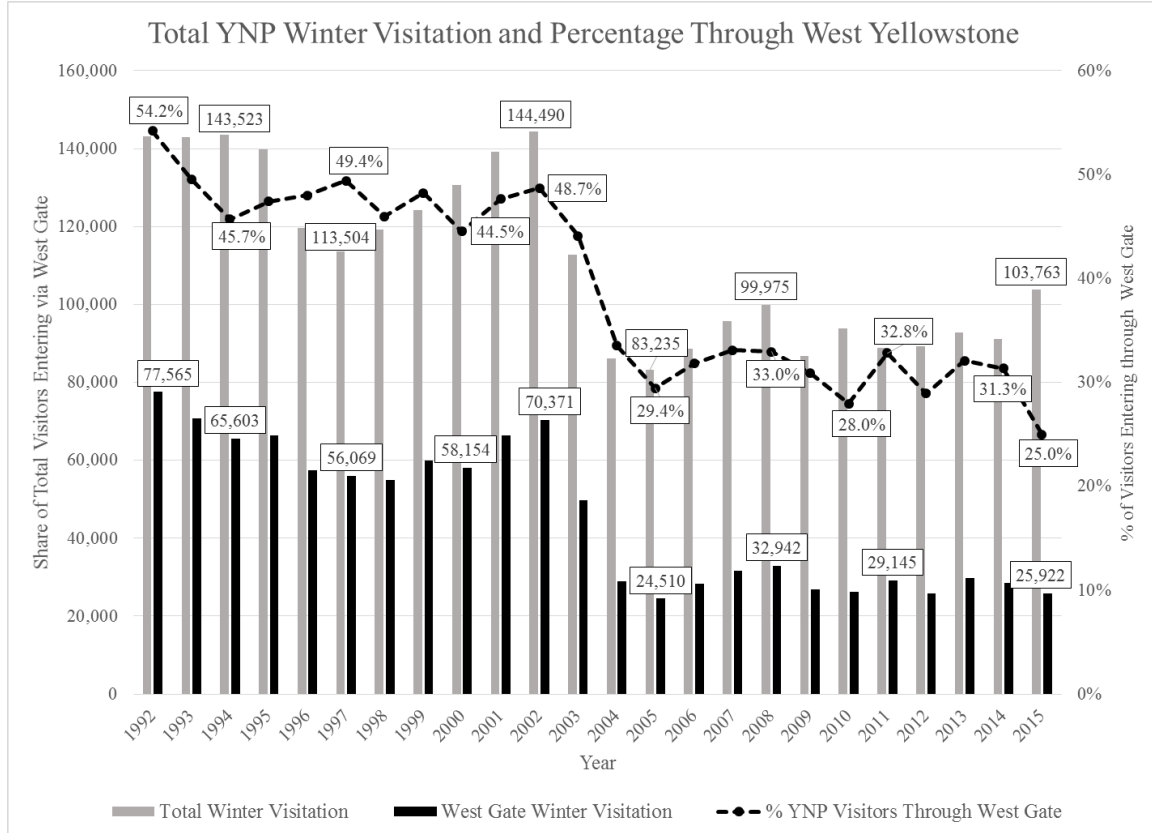


Figure 2 depicts the number of winter recreational visitors to YNP with the number and percent of total visitors (secondary axis) who entered the park through West Yellowstone and the western entrance.

4. DISCUSSION

For West Yellowstone, the snowmobiling restrictions and uncertainty surrounding YNP winter use management enhanced some of the challenges associated with the process of resortification and increased industrial tourism. Though West Yellowstone is not a resort destination comparable to Vail or Sun Valley, the tourism-dependent town is dealing with some of the issues that other resort towns encountered as they slid through the resortification process. For West Yellowstone, these difficulties include: congestion, corporate takeover of local businesses, absentee homeownership, a seasonal economy and

low-quality employment opportunities. The winter use restrictions amplified some of these challenges and exacerbated the problem by drawing the community's attention and resources into a fight against the snowmobiling restrictions. Consequently, as the community devoted resources to the winter use management debate, the challenges of resortification strained the town's social fabric and negatively impacted its community resilience. To be clear, we are not arguing that the winter use restrictions forced West Yellowstone to transition from a gateway community into a resort-town, but rather that the winter use restrictions acted on West Yellowstone in a manner to magnify the challenges facing the town. Apart from the winter use restrictions, there are other large-scale, exogenous forces acting upon the tourism economy of West Yellowstone such as growing industrial tourism in national parks and a wealthier and more globalized world that has increased international tourism options.

4.1 Resortification

4.1.1 Snowmobiling in YNP: Before and After Winter Use Management

Prior to the implementation of the first round of snowmobiling restrictions in 2003, West Yellowstone's winter economy was growing and thriving as a specialized winter service provider. According to one snowmobiling rental and summer tour manager, a strong February for his business in the 1990s generated nearly as much revenue as his best July. Whether this individual's winter operation was simply more popular than their summer touring business is unclear, but regardless, on a daily basis, rental businesses were sending hundreds of snowmobilers into YNP and the dining and lodging businesses all benefited from the increased visitation. The increased winter

visitation correlated with a significant increase in the resort taxes West Yellowstone collected in the winter months (see Figure 3). From 1986, when resort taxes began, through 2001-2002, resort tax collections increased nearly every year. But after YNP snowmobiling peaked in 2002 and the NPS implemented restrictions, winter resort tax collections decreased dramatically and remain significantly below their highs from the early 2000s.

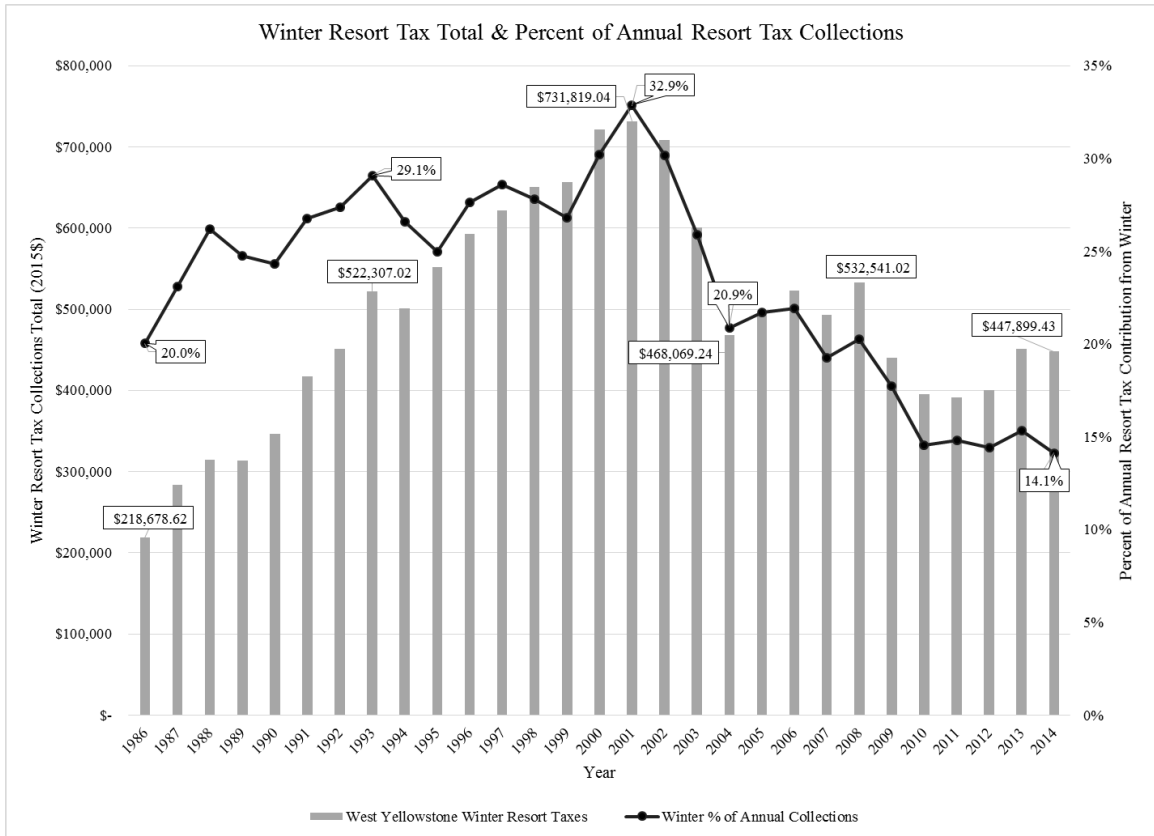


Figure 3 shows a bar graph that represents the amount of resort taxes collected in West Yellowstone each winter (December through March and adjusted to 2015 dollars). The secondary axis is the percentage that winter resort taxes contributed to the annual total of resort taxes collected in West Yellowstone. The winter contribution peaked in 2001 during the last years of the snowmobiling heyday in West Yellowstone and then both the winter total and percentage decline after the implementation of the snowmobiling restrictions.

The interviews revealed that many residents perceive the heyday of snowmobiling to be a thing of the past, an era that will not return. According to interviewees, a number of factors coalesced in the early 2000s to permanently alter the landscape of recreational snowmobiling within the GYA. The September 11th terrorist attacks in 2001 (Goodrich, 2002) and national recession of 2007-2009 (Ritchie, Molinar, & Frechtling, 2010) both had a negative impact on vacationing and travel within North America. Snowmobiling became less popular, in part due to reduced snowpack and climate change concerns (Gossling & Hall, 2006; Daniel Scott, Dawson, & Jones, 2008). Fuel prices increased (Becken, 2011; Pergams & Zaradic, 2006) and the aging snowmobiling population began to consider the warmth of Florida or Arizona more appealing than the winter weather in West Yellowstone (Scott, 2003; Scott et al., 2008). All of these factors, in addition to the snowmobiling restrictions imposed by the NPS, were impediments to the snowmobiling market of West Yellowstone.

4.1.2 Seasonality of West Yellowstone's Economy

Seasonality creates an imbalanced economy that exposes the local housing and labor markets to an annual cycle of crests and troughs (Clifford, 2002; Travis, 2007). For West Yellowstone, the monthly resort tax collections reveal the seasonality of the local economy. Since 1986 when West Yellowstone implemented the resort tax, adjusted for inflation, the annual collections have been steadily increasing. The annual total has risen from \$1.1 million in 1986 to \$3.2 million in 2014. Figure 2 illustrates that the winter tourist activity of West Yellowstone, largely based on snowmobiling, grew to become nearly one-third, 32.9%, of the annual resort tax collections in 2001. The figure also

highlights the decrease in tax collections and annual contribution since the early 2000s. The decrease is partially due to increased summer visitation, but it is clear that the snowmobiling restrictions had an immediate and lasting impact on winter resort taxes. This indicates that summer tourism is powering West Yellowstone's local economy and the town is returning to a summer-focused gateway in which many businesses do not operate in the winter. Several interviewees estimated that during the 1990s, over 50% of West Yellowstone businesses remained open throughout the winter. This was a far departure from the 1960s when nearly everything shutdown during the winter (Eagle & Eagle, 1978; Shea, 2009). However, since the implementation of snowmobiling restrictions and the decrease in winter visitation, residents estimate that less than 30% of West Yellowstone businesses now remain open during the winter.

Presently, as the winter economy of West Yellowstone struggles, summer tourism through West Yellowstone is increasing and exacerbating the seasonality of the town. Figure 4 illustrates the increasing seasonality of West Yellowstone by plotting winter versus summer visitation to YNP. The secondary axis shows the percentage of annual tourists that entered YNP through West Yellowstone in the winter. In 2015, over 1.7 million visitors entered YNP through the western entrance and less than 26,000, or 1.5% of them, visited the park in the winter (Figure 4), and accounted for 14.1% of the annual resort tax collections (Figure 3). This is a drop from 2001 when 6.2% of annual visitation occurred in the winter, but still accounted for 32.9% of the annual resort taxes collected. This means that, on average, those winter visitors spent much more than the summer visitors. As Figure 4 reveals, the percentage has generally decreased since the early

1990s when winter visitation accounted for over 7% of annual visitors at the west gate, but the cause of the decline was both the decrease in winter visitation and the increase in summer visitation through West Yellowstone. Through an interview with the West Yellowstone Chamber of Commerce, we learned that local officials urge hoteliers who are interested in opening a new facility in the town to not operate during the winter months because so many existing rooms already go unoccupied. New hotels are welcome to develop and operate in the summer when visitation is breaking records, but not in the winter when existing hoteliers are already struggling to fill their beds.

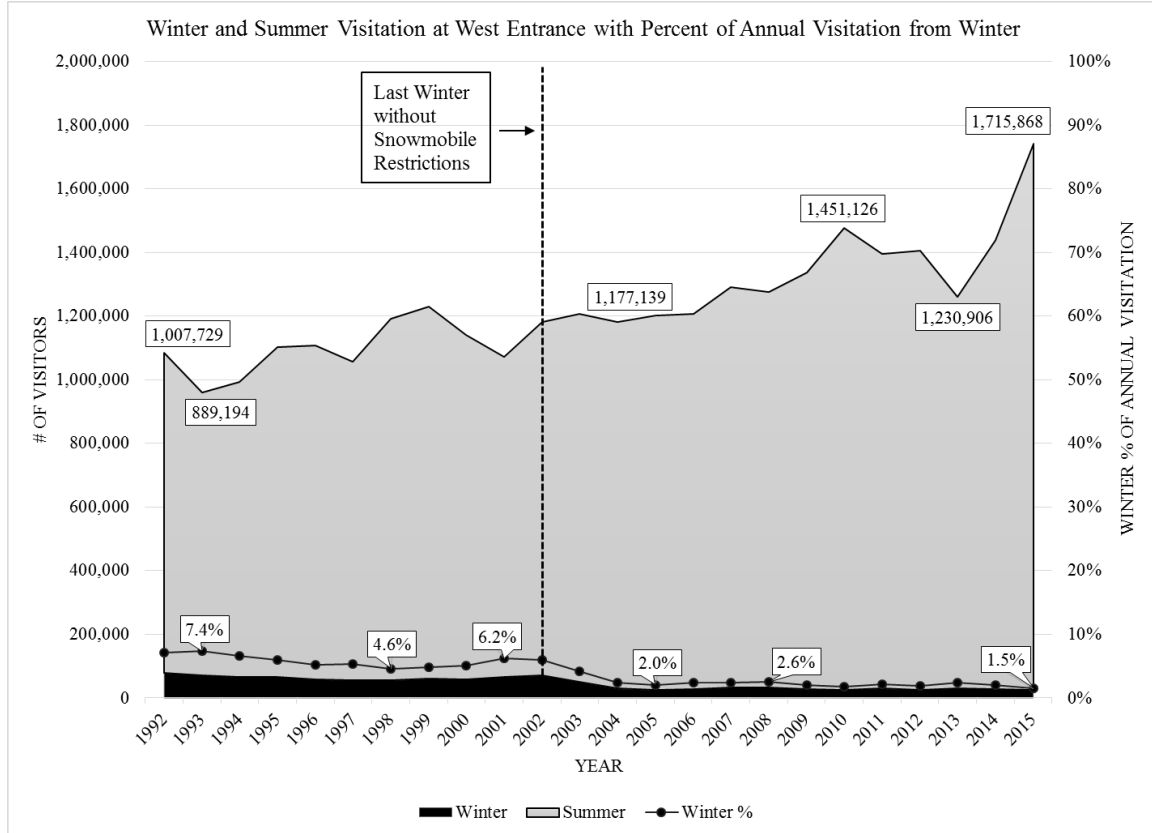


Figure 4 depicts the number of YNP visitors entering through the western entrance for both the summer and winter seasons. On the secondary axis, the number of winter visitors has been converted to a percentage of total annual visitation. After the NPS implemented snowmobile restrictions, there was a decline in winter visitation. Since 2013, there has also been a significant increase in the number of summer visitors traveling through West Yellowstone.

4.1.3 Absentee Ownership and Impact on Community Resilience

Both Clifford (2002) and Rothman (1998) wrote extensively about the challenges that ‘absentee capital,’ money invested by major foreign corporations, banks and real estate moguls, can present for a small community. Drawing on examples from several ski towns in California, Colorado and Idaho, they argued that outside capital altered the community identity of the small towns. As corporate chains bought the ‘mom and pop’ stores and real estate developers and vacation homeowners purchased the real estate,

change became uncontrollable. Absentee owners strained the community resilience because they were less involved and active within the community, a foundation of strong resilience (Magis, 2010).

Several business owners, including a local real estate agent, noted during their interviews that both secondary homeownership and absentee business ownership were increasing in West Yellowstone. Of particular concern was that Delaware North, an international food service, hospitality and concessionaire of national parks, had recently purchased a significant amount of lodging real estate throughout West Yellowstone (Repanshek, 2010; White, 2009). Residents recognized that Delaware North focuses on extracting profits from West Yellowstone tourists, not investing in the community's affairs. As one resident stated, "What do they care about our town? They're off in their headquarters in New York and won't think twice about us. They don't care about our community."

West Yellowstone residents also noted that the price of real estate has increased. This challenges the affordability of West Yellowstone for locals. High real estate prices are a common challenge for popular resort towns. They often force low-wage seasonal employees to either commute very long distances or share small, low-quality housing rentals (Clifford, 2002; Travis, 2007). According to the 2010 Census, over 36% of West Yellowstone's housing was classified as vacant with 17.3% of all housing categorized as seasonal or recreational (U.S. Census Bureau, 2010a). Respectively, the national averages for these categories are 12.2% and 4.0%. This illustrates the elevated number of rental properties and secondary homeownership (U.S. Census Bureau, 2010b). Due to

absentee ownership, community resilience is diminished because the wealthiest seasonal homeowners have less interest or availability to interact with the permanent residents and participate in local functions (Clendenning & Field, 2005). As one resident said, “(Recently) it’s harder to get volunteers and participants in community events and church attendance seems to be down....The vacation homeowners just aren’t around as much or care as much about the community.”

4.1.4 Socioeconomic Impacts since the Implementation of Snowmobiling Restrictions

The NPS’ EIS identified potential economic impacts on West Yellowstone. Because the local winter economy of West Yellowstone is heavily dependent on snowmobiling, the EIS acknowledged the potential for significant, but acute impacts on the snowmobiling rental businesses of West Yellowstone. These projections proved accurate as the snowmobiling restrictions limited visitation and stressed the snowmobile rental businesses. Consequently, business owners decreased their number of year-round employees. Business owners said they eliminated middle management positions, which had belonged to permanent residents of West Yellowstone. Subsequently, these residents had to relocate to find new employment. Therefore, the winter use restrictions decreased the number of year-round employees involved in winter-related services, forced out community members and weakened community resilience. The winter use restrictions increased dependence on seasonal labor and caused higher annual turnover of personnel.

One interviewee informed us that the number of enrolled schoolchildren has remained relatively stable despite the changes to the town’s economy. In part, this is due to the increasing Latino population working within West Yellowstone. Latinos currently

make up about one-fifth of the local population (U.S. Census Bureau, 2010a), but, according to a city commissioner, comprise over 40% of the local student body. Some residents are concerned because they believe that a significant proportion of the Latino population are only temporarily working in West Yellowstone to make money to send back home and out of the local economy. “I respect their work ethic and what they’re doing for their families, but all that money they’re saving is being sent back home.” At the root, it is the increasing seasonality of West Yellowstone that is creating many of these challenges and issues. The difficulty of sustaining a vibrant winter economy has tilted the tourism economy of West Yellowstone towards the summer season and reoriented businesses to focus on summer tourism. As a result, several aspects of community resilience have decreased. The discussion of these dimensions are included the next section.

It is impossible to know what would have happened to West Yellowstone’s economy and community resilience in the absence of snowmobiling restrictions in YNP. It is likely that several challenges of resortification, issues such as increasing absentee business ownership and quality of employment opportunities, would have grown or emerged regardless of the winter use management in YNP. However, the winter use restrictions in YNP magnified some of the challenges and distracted the community of West Yellowstone from several of the issues facing the town. Both the heightened seasonality of the economy and the YNP snowmobiling debate that prompted local officials and business owners to engage community resources in an attempt to overturn the snowmobiling restrictions diminished the town’s community resilience.

4.2 Community Resilience

The increasing seasonality of West Yellowstone's economy presents several challenges to city planners and local officials. For example, seasonal tourism often creates congestion, sprawl, absentee ownership, and low-quality employment opportunities. These problems challenge the social network in the near-term and, over time, can decrease resources of community resilience. Interviews with West Yellowstone residents focused on three dimensions of community resilience: impact, equity and development of resources.

4.2.1 Impact

The impact dimension assesses the degree to which residents resist change. For example, is change accepted or is it fought? Resilience increases in communities that embrace change as an impetus to explore new ideas and opportunities. In other words, does the community view a shock as an opportunity to try something different? In West Yellowstone, generally, the local businesses and government were reluctant to accept change. The snowmobile rental businesses united to fight the NPS and environmental NGOs that advocated for a complete ban on snowmobiles in YNP (Duncan, 2012; Yochim, 2009). However, in interviews they revealed that they felt ignored during the debate. Especially as the snowmobiling conflict entered the federal courts and national stage where they had little sway. The businesses spent an enormous amount of time and money embroiled in a legal battle with the environmental groups. This created a great deal of negative publicity surrounding recreation and YNP (Duncan, 2012; McBeth,

Shanahan, Arnell, & Hathaway, 2007; McBeth, Shanahan, & Jones, 2005; Shanahan, McBeth, Hathaway, & Arnell, 2008). In hindsight, business owners felt the major stakeholders of the snowmobiling debate had overwhelmed their voices. The involved groups, equipped with nationwide membership and bottomless pockets, elevated the debate to the national stage and forgot about the local concerns of West Yellowstone business owners. Due to persistent media misrepresentation of the YNP management debate, the gateway communities of YNP still encounter the misperception that the NPS has banned snowmobiling in YNP. “We still go to snowmobile expos all over the country and have to explain to people that YNP is in fact open in the winter and snowmobiling is still permitted.” Some business owners responded better to the new winter management plans and shifted their businesses to embrace snowcoaches or other forms of winter recreation, but these were in the minority.

Among snowmobile business owners, the winter use restrictions enhanced bitterness toward environmental groups and the federal government because owners blamed these entities for their financial hardship. This bitterness has not abated with time. During one interview, a business owner raised his hands to mimic strangling the NPS, to reciprocate what they had done to him and his business. “We (the snowmobile rental business owners) never had a chance. They (the NPS and Washington, DC politicians) never even listened to us. We offered them an all-expenses-paid trip to fly out and visit West Yellowstone in the winter, but they never even bothered. We just couldn’t compete with the endless attacks and bottomless pockets of the environmental groups....We never had a chance.” The business owner was visibly upset about the

layoffs and the pain he inflicted on his former employees' families. As he saw it, the federal government took those jobs away from him and West Yellowstone. Figure 5 is an indexed graph that illustrates the effect the snowmobiling restrictions had on winter visitation to West Yellowstone, but also depicts the recent increase in total annual visitation to YNP through the western entrance. Considering the recent increases in annual visitation through West Yellowstone, the NETS data reveal an alarming trend that total annual revenue for all businesses of West Yellowstone is decreasing while annual visitation to YNP through West Yellowstone is increasing. In other words, there is a widening gap between annual visitation through West Yellowstone and the total annual business revenue of West Yellowstone establishments.

Not all businesses report their annual revenue and employment information to Dun & Bradstreet (the foundation of the NETS database) so the database managers of NETS utilize proprietary techniques to estimate revenue and employment figures for each establishment. The database creators calculated the revenue figures using an industry (SIC) average for sales per employee. Relying on an estimation of revenue and employment information is a limitation of the data, but observing the trend of the data rather than the exact numbers still reveal important economic trends of West Yellowstone. The establishments, jobs and annual revenue of West Yellowstone have all decreased since the early to mid-2000s (Figure 6). Figure 6 also reveals the significant impact the national recession from 2007-2009 had on the local economy of West Yellowstone even though annual visitation to YNP through the western entrance was increasing during this timeframe (Figure 5).

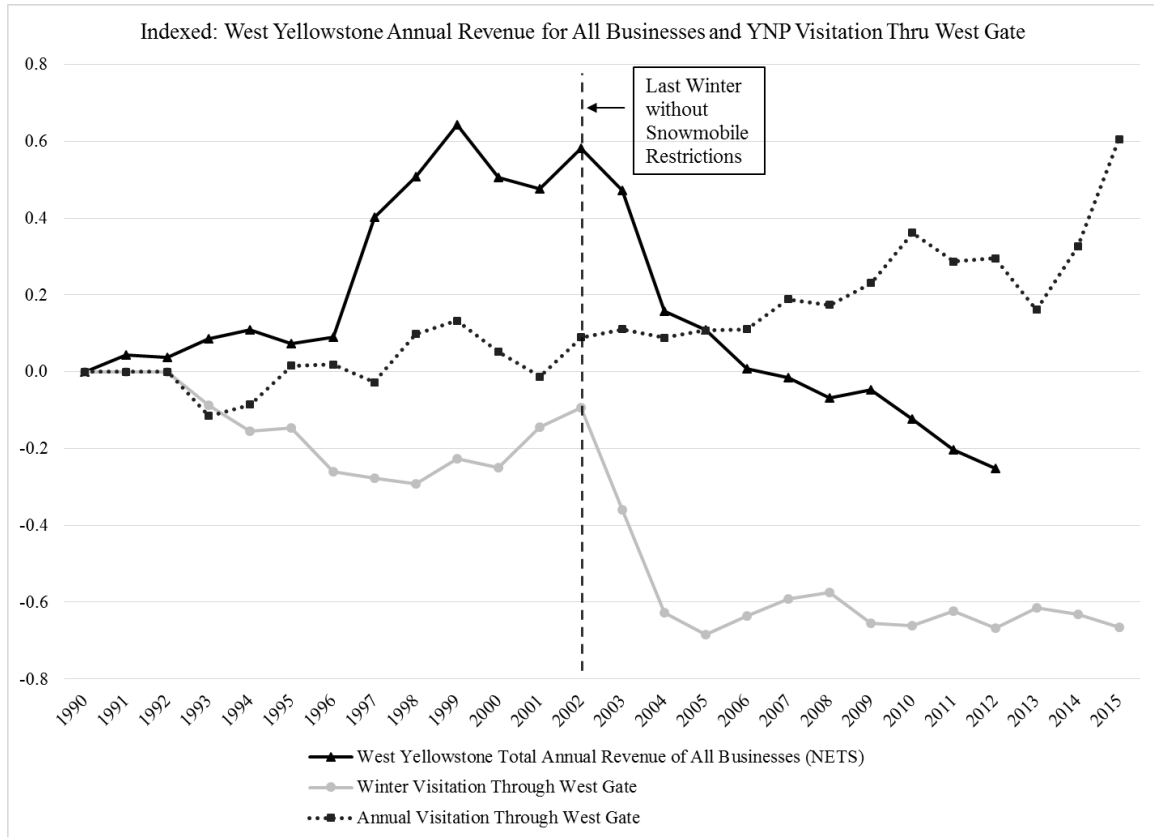


Figure 5 shows the winter visitation and total annual visitation through the west gate of YNP. The NETS data represents the annual change in total revenue of all West Yellowstone enterprises as reported by Walls & Associates.

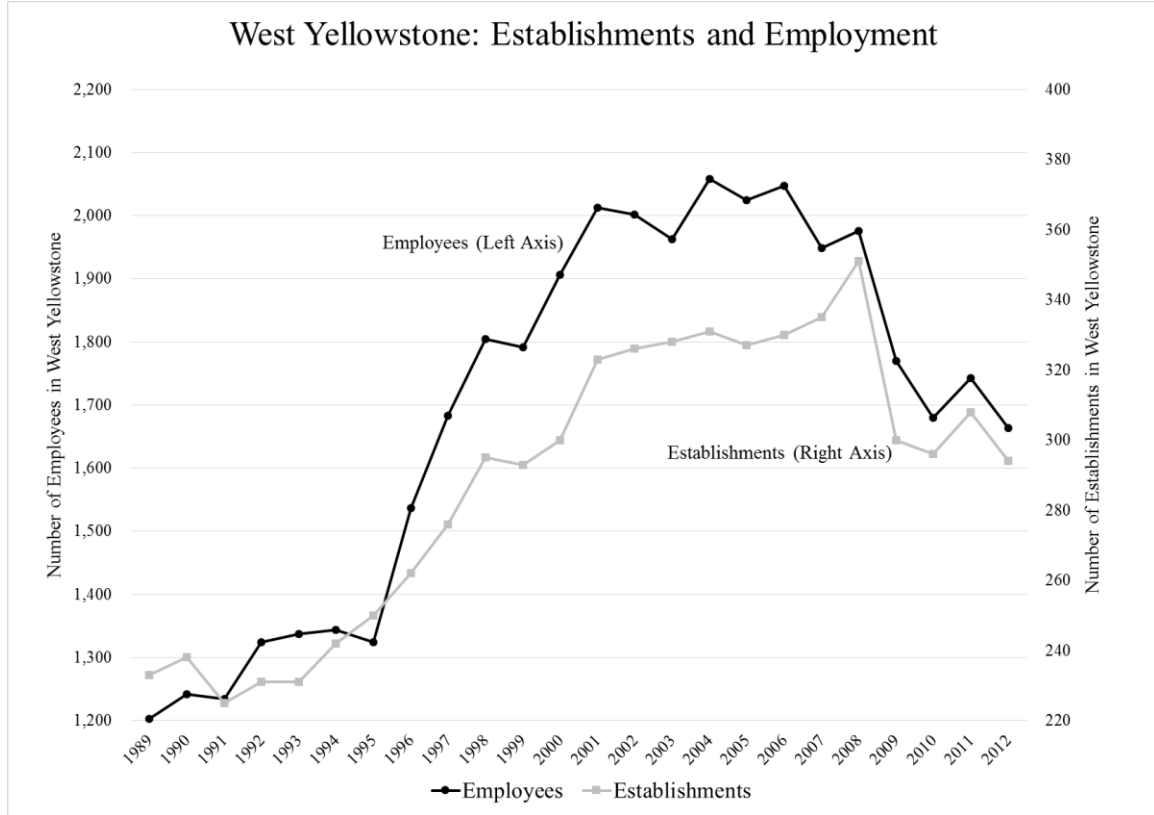


Figure 6 is derived from the NETS database and shows the number of active establishments and jobs within West Yellowstone for each year from 1990 through 2013.

4.2.2 Equity

Within a distressed community, beneficial economic development requires equitable access and a fair distribution of community resources: social, natural, political, human and financial capital (Magis, 2010; Ross & Berkes, 2014; Sherrieb et al., 2010).

In order to evaluate equity within a community resilience assessment, researchers

interview different minority, age, and financial groups to ensure that macro-level

indicators do not obscure inequalities across groups (Magis, 2010). In West

Yellowstone, we conducted interviews with different gender, age and financial groups.

However, due to the lack of representation of minorities in local government and business ownership, the minority perspective was limited to only those employed in the low-wage

service sectors. During the interviews, residents frequently mentioned aspects of inequality, but were not topics of major concern. Numerous residents referred to the group of city commissioners as the “Old Guard.” Residents believed that it was not their official position that created their power, but rather their informal influence over local functions. The commission is comprised of small business owners (including several snowmobile rental business owners) who have lived in West Yellowstone for decades. An outside economic consultant to the town proposed two ideas for West Yellowstone to capture more tourism revenue: (1) revamp the downtown with a new tax district and (2) re-brand itself as a winter destination in which snowmobiling acts as only one of multiple local attractions. However, the consultant only encountered lethargic skepticism from the city leaders, because, he was viewed as an outsider who did not appreciate their local values. As several local officials and businessmen said, this is Montana and change is not easy and generally unwelcome.

Beyond the city limits of West Yellowstone, parts of the GYA are experiencing the effects of a wealthier and more globalized world. A new sector of tourism clientele has developed with the success of the middle class in several Asian countries (Sparks & Pan, 2009). However, numerous interviewees described a difficult cultural clash and cited Montana’s traditional and conservative attitude towards change as a hurdle to embracing the new wave of tourism. Despite annual workshops on Asian customs and social norms for the service workers of West Yellowstone, many business owners and locals have struggled with the cultural clash and language barrier.

The inequality of development is also evident on the landscape because of the dearth of visible Latino businesses. As previously mentioned, roughly one-fifth of the local population is Latino, but they lack representation within the local government. We conducted many of the interviews with local business owners and city commissioners, but it is a group of people with no minorities and only a few women. Because of this, we specifically pursued interviews with women and low-wage service personnel to diversify perspectives.

4.2.3 Development of Community Resources

Similar to the dimension of equity, economic indicators assist the evaluation of the development of community resources. One metric of the development of community resources is the volume and success of new business ventures and employment opportunities within the local economy. Higher levels of social capital are associated with more successful and socially responsible businesses (Kilkenny, Nalbarte, & Besser, 1999) that provide greater economic stability and equality (Casey & Christ, 2005). Therefore, if an external shock has a detrimental effect on social capital, the community will likely struggle to marshal its resources and promote community betterment through new economic pursuits (Besser, Recker, & Agnitsch, 2008). As previously mentioned, local leaders were not receptive to an outsider's proposal to rebrand West Yellowstone and change its marketing strategy. Business owners said they did what they had to do to survive, which required laying people off, consolidation, limiting hours, or closing their business for the winter. These responses demonstrate their persistence to maintain the status quo which is a poor adaptation strategy within the metrics of community resilience.

A final measure of development of community resources asks: to what extent do communities affected by change keep doing things the same way or accept change and try a new way to do things (Magis, 2010)? West Yellowstone businesses banded together with the International Snowmobile Manufacturers Association (ISMA), the Blue Ribbon Coalition and other chambers of commerce and entrenched themselves in a struggle to try and keep things the same (Duncan, 2012; Yochim, 2009). A few business owners attempted to adapt to the winter use restrictions and shift their focus toward snowcoaches and cross country skiing, but for the large majority, businesses struggled and the winter economy of West Yellowstone withered.

4.3 Current Challenges & Future Opportunities

For West Yellowstone, the recent success of Big Sky Resort, just 50 miles to the north, has altered the tourism landscape of the region. Big Sky has grown into a full-fledged destination resort that attracts people from all over the world (Wylie, 2014). West Yellowstone fulfills a role as a gateway community for Big Sky visitors who are interested in entering YNP, but many Big Sky visitors spend little time or money in West Yellowstone. Residents believe that Big Sky tourists travel to West Yellowstone to gain access to the park, but often return to Big Sky for their dining and lodging needs. “The wealth of Big Sky is on another level than us and, frankly, we (West Yellowstone) don’t have the dining or lodging options that they want. They would rather drive back to Big Sky to stay in their fancy cabin and eat a gourmet meal.” Thus, West Yellowstone, misses a major opportunity for tourism income (refer to Figure 5).

West Yellowstone is also struggling to capitalize on a recent surge in tourism from Asia. Both the advancement of China's economy and a joint program between the US and China that streamlined the visa process have sparked an increase in the amount of travel between the two countries (Kendall, 2015; Sparks & Pan, 2009). Over the past few years, billboards have appeared around Yellowstone with Chinese characters (Kendall, 2015). Residents of West Yellowstone complain that many Asian tourists are traveling through West Yellowstone, but not spending many dollars within the town. Business owners and local officials believe that many international tourists are part of pre-planned trips (Yellowstone Tours, 2016) that typically utilize buses or large vans and follow an itinerary that primarily benefit major chains or businesses already owned by Asian internationals (America Asia Travel Center, 2016). Since 2009, YNP visitation via bus has increased by over 130,000 people (Figure 7), but the NETS data still reveal a downward trend in annual revenue since 2002 (Figure 5). It appears as if the majority of West Yellowstone's local enterprises have yet to find a mechanism to financially benefit from the new wave of Big Sky and Asian tourists.

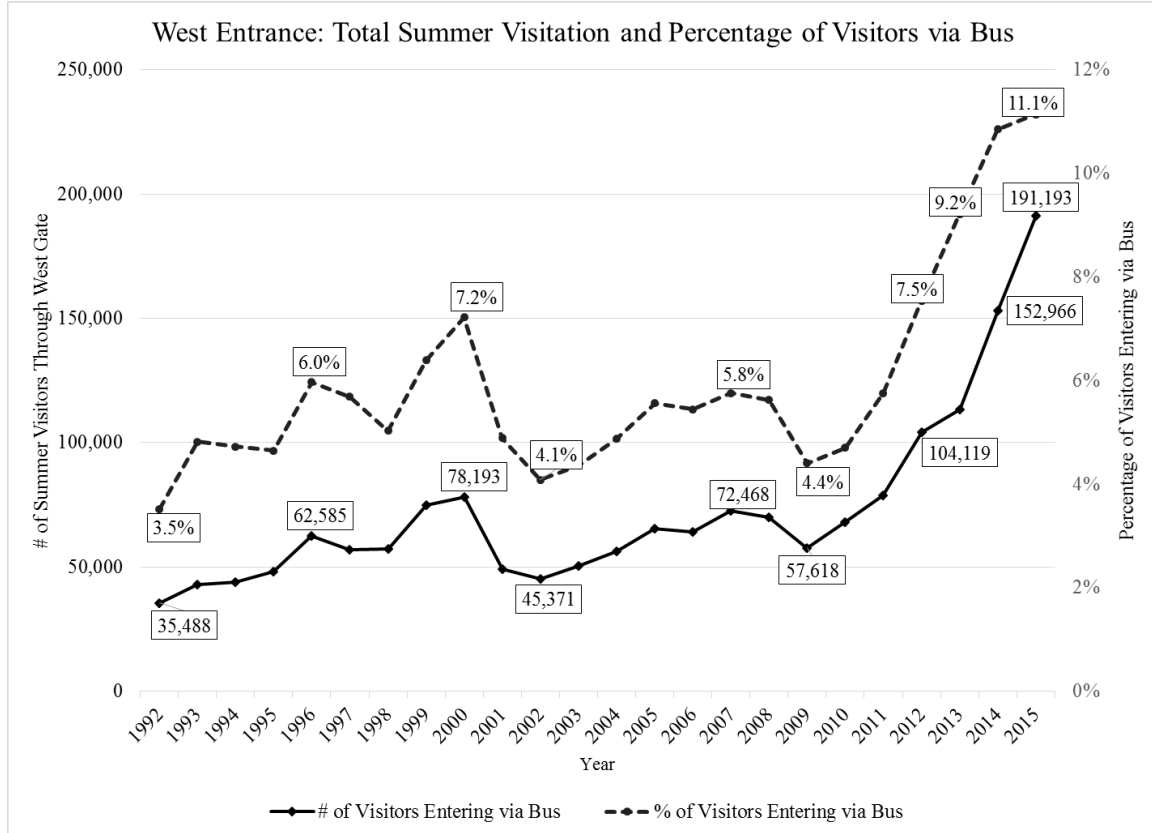


Figure 7 Shows the number of YNP bus passengers who entered through the western entrance. The secondary axis represents the percentage of west gate visitors who entered via bus.

Figures 4, 5, and 7 depict a mixed message. On the positive, visitation through West Yellowstone is increasing which indicates more opportunities to capture tourist dollars. However, West Yellowstone businesses need to adapt and discover how to convince tourists to stop, shop and spend time in their community. One interviewee explained that West Yellowstone business owners are to blame because Asian tourists are interested in purchasing authentic American souvenirs, but have no interest in buying souvenirs produced and imported from Asian countries (Schontzler, 2015). “Why would a Chinese tourist fly halfway around the world to buy a little souvenir in West Yellowstone that was made in their hometown? They wouldn’t and they don’t.”

5. CONCLUSION

In this paper, we used the gateway town of West Yellowstone as a case study to explore the impacts of industrial tourism, resortification and the winter use restrictions in YNP on the community resilience of a tourism-dependent town. The winter use restrictions became a drain on the community resources of West Yellowstone and diminished the capacity of the community to resist the challenges of resortification. This mixed-methods study investigated how the manifestations of resortification; a seasonal economy, absentee business ownership, secondary homeownership, and an abundance of low-quality service jobs expanded during the winter use debate and combined to strain and diminish the community resilience of West Yellowstone. We analyzed three dimensions of community resilience; impact, equity, and development of community resources in order to explore how the winter use restrictions and snowmobile debate had a negative impact on the resilience of West Yellowstone. We found that the winter use restrictions increased the seasonality of West Yellowstone's economy, thus removing year-round employment opportunities and replacing them with lower-quality jobs that accelerated the turnover of employees from year to year. When combined with the increasing absentee business ownership within West Yellowstone, corporations, such as Delaware North, decreased the community resilience of the town.

This study introduced a new method to consider the relationship between resortification and community resilience. As an integral driver of some remote economies, the effects of tourism on the community fabric of small towns is an important subject and worthy of future study. Previous work has studied the perceptions of

residents towards future tourism development, but in future studies, researchers should consider should how additional tourism development may affect the dimensions of community resilience. Scholars of the American West have observed that some formerly natural resource dependent towns have transitioned into gateway communities with economies focused on recreational tourism. Future work on community resilience of gateway communities and resort towns should consider the differences between towns that transitioned into a tourist economy versus those that have always existed as a tourist town. As is the case with previous community resilience assessments, this study occurred after the local shock. Therefore, future studies should attempt to document community resilience evaluations in gateway communities and tourism-dependent towns prior to the external stressor(s). This would establish a baseline of community resilience for future comparisons and inform city planners and local officials about potential challenges from increasing tourism and resortification. Additional data and further research of community resilience in gateway towns will help communities maintain a strong social network and promote life as they attempt to cope with the challenges of an increasingly industrialized, globalized and competitive world.

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CHAPTER 3 – CONCLUSIONS, LIMITATIONS AND FUTURE RESEARCH

This paper used the experience of West Yellowstone through the winter use management debate of YNP as a case study to explore the impacts of industrial tourism and resortification on community resilience. The pressures of industrial tourism and resortification, on local and global scales, have exposed West Yellowstone, a tourism-dependent gateway community, to socioeconomic challenges. The mixed-methods research design investigated how the winter use management debate exacerbated the challenges of resortification and drained the town of its community resources thereby straining and diminishing the community resilience of West Yellowstone.

West Yellowstone represents a classic gateway community, but its geographic situation is unique. Over the past forty years, parts of the Greater Yellowstone Area have evolved and developed quickly. Some nearby cities, such as Jackson, WY and Bozeman, MT, have become the foci of population growth and economic diversification. Another regional factor has been the rapid rise of Big Sky Resort, just 50 miles north of West Yellowstone, which has altered the tourism landscape of the region. Big Sky has quickly become a popular resort destination in the wintertime and is an increasingly popular summertime destination as well. Vacation homeowners, primarily from distant places, have invested a tremendous amount of capital in the local construction sector to erect massive seasonal homes. Big Sky's growth has altered the challenges of West Yellowstone as it continues to function as a gateway community, but now under Big Sky's shadow. For both towns, they are increasingly dealing with difficulties stemming from housing availability, seasonal employment and traffic congestion. But it appears

that Big Sky has surpassed West Yellowstone and become the corridor's primary winter destination for tourists. West Yellowstone will need to discover a mechanism to attract spending from YNP day-trippers from Big Sky.

In addition to the local effects on visitation from Big Sky Resort and YNP management, the businesses of West Yellowstone are operating in an increasingly globalized world. Coupled with a streamlined visa process, the rise of the middle-class in several Asian economies has enabled a vast new number of visitors to travel to YNP. Some business owners of West Yellowstone have failed to seize opportunities from the new clientele due to difficulties with cultural differences and language barriers. An increasing number of tourists are traveling through the town on their way into YNP every summer, but the businesses of West Yellowstone are struggling to attract these potential customers to spend time and money in their town. The relative share of bus passengers to YNP is also increasing, what can West Yellowstone businesses do to encourage these passengers to get off the bus and buy goods and services in their stores? Globalization and industrial tourism are increasingly shaping the economic opportunities and success of West Yellowstone. Local government officials and business owners need to embrace the new realities of modern tourism, otherwise existence as a vibrant gateway community will prove increasingly difficult for West Yellowstone.

As community resilience is an ongoing process, the snapshot approach to evaluating community resilience remains limited. Future studies of gateway towns will benefit from longitudinal studies of community resilience. A longitudinal study of a gateway town could also capture the community resilience before and after a local shock

or stressor. This would further the understanding of how different types of disasters and stressors affect a community. Another area of future study of gateway communities should consider the different types. How does community resilience differ in a place established for non-tourism purposes, but evolved into a tourism-dependent town? Another avenue of future research could investigate the similarities and differences between gateway communities of the same National Park or National Forest. For example, it may prove insightful to study the different roles and resident perceptions of community resilience in Gardiner, Cooke City and Cody. Furthermore, how do gateway communities differ across regions and even countries? Some of the research discussed in this paper was conducted in towns of England, Scotland and Spain. How do resident perceptions of tourism development and a tourism-dependent economy vary from country to country?

Common to studies of low-population areas, there are limitations within the collected data. I conducted thirteen semi-structured interviews with various residents of West Yellowstone. Future studies of gateway towns may attempt to collect more perspectives. In addition, regional and county scale economic data can overshadow indicators of a small town. It is a common challenge to collect accurate data on a scale such as the size of West Yellowstone. Enhancing both the qualitative and quantitative data utilized in studies of gateway communities will bolster the findings and conclusions.

In concluding this study, I think it is worthwhile to briefly consider what West Yellowstone could have done differently to promote a quicker and more financially efficient conclusion to the winter use debate? An important conclusion from the

community resilience assessment of West Yellowstone noted the business owners' determination and refusal to bend or adapt to new winter use restrictions within YNP. The tremendous resources they devoted to the debate drained other capacities and the community's resilience. In hindsight, it appears the local control of West Yellowstone by the Old Guard and their traditional outlook obstructed a timely and business savvy adaptation to the new NPS management policies. For West Yellowstone, significant change and modernization may not occur until a new wave of open-minded politicians rise to power in local offices or the current group of officials increase their transparency and open themselves up to new, diverse ideas and opportunities.

Community resilience in gateway towns, particularly in places that are tourism-dependent and geographically remote, is an understudied subject in the rural sociology and tourism literature. West Yellowstone and its experience throughout the snowmobiling restrictions and winter use management debate is a useful case study to initiate the investigation into the challenges facing different dimensions of community resilience within a gateway community. Rural and remote gateway communities, engaging their resilience, can identify local vulnerabilities and be prepared to manage and shape the role of tourism within their economies. If visitation to the National Park System continues to increase and tourism continues to grow as the economic driver of some gateway communities, understanding the relationship between tourism and community resilience in gateway towns will become increasingly important. Additional data and further research of community resilience in gateway towns will help

communities maintain a strong social network and promote life as they attempt to cope with the challenges of an increasingly industrialized, globalized and competitive world.

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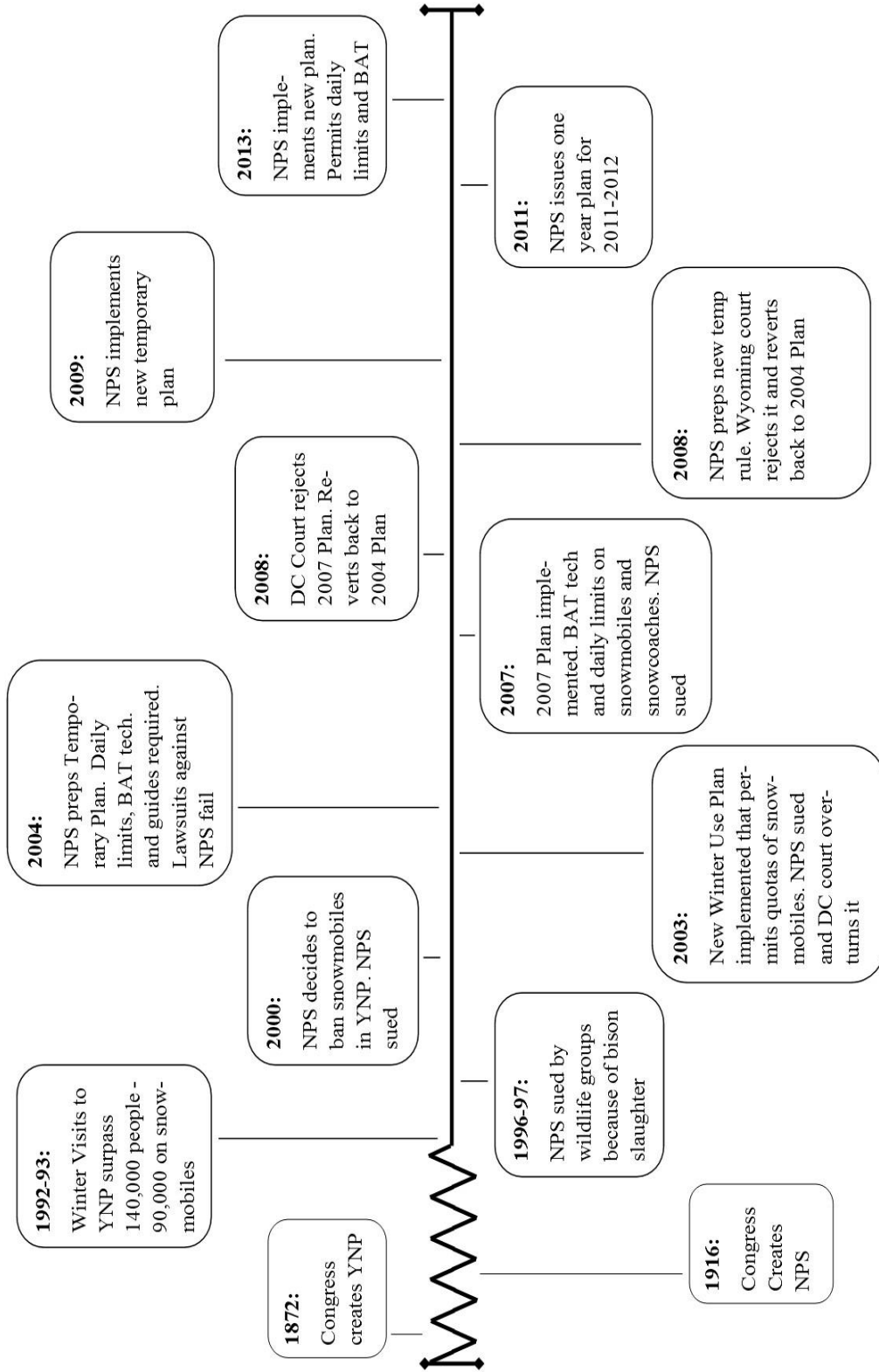
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APPENDICES

APPENDIX A

TIMELINE OF WINTER USE IN YELLOWSTONE NATIONAL PARK



APPENDIX B

LEGAL HISTORY OF WINTER USE MANAGEMENT IN YELLOWSTONE
NATIONAL PARK

Note: The following appendix is written in legal review format. The paper provides background on the legislative mandate of the National Park Service and covers the bulk of the winter use debate from the late 1990s through the publication of the 2013 Winter Use Plan.

Introduction

As the National Park Service celebrates its centennial, it is remarkable that the contradictory dual mandate contained within the Organic Act of 1916 is still directing the National Park Service in their management of many of the United States' most cherished parks, monuments and historical sites. The Organic Act 16 U.S.C. § 1, mandates that the National Park Service (NPS) "conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations." This statutory dual mandate has regularly pitted preservationists against recreationalists in terms of National Park management priorities. While the dual mandate has assisted the NPS to assemble and administer some of the most beautiful and significant places in America, it has also created countless disagreements and lawsuits for the NPS in their capacity as a Federal land management agency.

Background

Debate over the dual mandate of the NPS' Organic Act is encapsulated in the recent debate over winter use management in Yellowstone National Park (YNP). Since the 1960's snowmobiling throughout the park has been increasing and reached a zenith in the 1990's when roughly 200,000 people visited the park in the winter months and over half of them entered YNP atop a snowmobile or within the confines of a snowcoach

(National Park Service, 2015c). Concurrent with the increasing winter recreation in YNP, environmental groups took notice and voiced concerns about the potential consequences of snowmobiling on park resources. In the early 1990's, due to rising scrutiny, the NPS was compelled to study the potential impacts and publish a winter use management plan based on their findings. Reacting and responding to numerous political reversals and judicial rulings, the NPS has engaged the National Environmental Policy Act (NEPA) process six times and promulgated twelve separate winter use plans since 2000. Numerous lawsuits have been brought against the NPS claiming they have violated their mandate to "provide for the enjoyment" of Yellowstone or that they have failed to "leave (park resources) unimpaired for the enjoyment of future generations" Id. For nearly the past two decades, the contradicting dual mandate of the NPS Organic Act has placed the National Park Service at the center of a national debate regarding winter use in Yellowstone National Park.

Prior to the debate regarding winter recreation within YNP, two relevant presidential executive orders were signed in the 1970's. First, in 1972, President Nixon signed Executive Order 11644 which defined 'off-road vehicles,' E.O. 11644 § 2(c), including snowmobiles, and established certain management requirements for the use of off-road vehicles (ORV's). Specifically, E.O. 11644 § 1 stated that:

It is the purpose of this order to establish policies and provide for procedures that will ensure that the use of off-road vehicles on public lands will be controlled and directed so as to protect the resources of those lands, to promote the safety of all users of those lands, and to minimize conflicts among the various uses of those lands.

The conservation-minded language of the E.O. 11644 explicitly mandated that the impacts on wildlife and wildlife habitats must be minimized. Then in 1977, President Carter supplemented this requirement with Executive Order 11989 that required ORV use to be suspended if the land-management agency determined that ORV use was causing considerable adverse environmental effects to public lands. The agency Secretary must keep the affected trails or areas closed until the adverse effects have been mitigated and protective measures have been implemented to prevent a reoccurrence E.O. 11989 § 2(a).

Since 1963 when snowmobiles were permitted in National Parks, the NPS has adopted a 'park-by-park' deference approach to snowmobile use. Most National Parks have since banned snowmobiles, one of the exceptions being YNP (as well as the neighboring Grand Teton National Park) (Congressional Research Service, Comay, Vincent, & Alexander, 2013). Though Yellowstone isn't the only National Park that allows snowmobile access today, it is the most popular and well-known. In the winter of 1993, just under 92,000 snowmobiles entered the park (National Park Service, 2015c). As the popularity of snowmobiling increased, Yellowstone became the focal point of winter recreationalists. In the winter of 1999-2000, excluding Alaska's national parks, YNP accounted for roughly 40% of all snowmobiling within the National Park system (Congressional Research Service, 2008). It was because of the budding popularity and the accumulating environmental concerns that YNP became a top priority of several prominent wildlife and environmental groups as well as snowmobile and recreation associations.

The Beginning

The origins of the NPS winter use management debate can be difficult to pinpoint due to the decades-long escalation of tension, but the winter of 1996-1997 became pivotal and is a good starting point. During a particularly harsh winter, in pursuit of forage, the YNP bison herd began migrating out of the park along the ORV groomed trails. As bison often carry brucellosis, a bacterial disease potentially deadly to domesticated livestock, the displaced bison were culled to prevent them from spreading brucellosis. Their slaughter ignited a national uproar and instigated nearly two decades worth of litigation regarding winter use management in YNP.

The bison slaughter prompted a lawsuit in the U.S. District Court for the District of Montana, Helena Division, in which the plaintiffs, the Greater Yellowstone Coalition et al., brought suit against Bruce Babbitt et al. They argued that the slaughter of the Yellowstone bison and YNP management permitting snowmobiles violated the National Environmental Policy Act (NEPA), the Endangered Species Act (ESA), the NPS' Organic Act, and the Yellowstone Act. *Greater Yellowstone Coalition v Bruce Babbitt and the State of Montana, et al.* 952 F. Supp. 1446 (D. Mont. 1997). Within months the involved parties reached a settlement agreement that directed the NPS to close a snowmobile trail to allow them to study their trail grooming policies and the effects of snowmobiling on YNP resources. The settlement also directed the NPS to prepare a new Winter Use Management Plan for YNP and an Environmental Impact Statement (EIS). However, in January of 1998, while the NPS was preparing the EIS of snowmobile use in YNP, they failed to comply with the court settlement and refused to close any of the

Park's snowmobiling trails while they were collecting data on the effects of winter recreation.

The 2001 Winter Use Management Plan

The NPS issued a draft of the EIS in the summer of 1999 that contained seven use alternatives that ranged from highly restricted snow-vehicle⁵ use to completely unrestricted snow-vehicle use and extensive trail grooming. Maximizing his political will during his lame duck phase, President Clinton, with the Department of the Interior, signed off on the final ruling, the '2001 Rule' for YNP on his final day in office. The 2001 Rule was to completely phase out snowmobiling throughout the park over the next three winters 66 Fed.Reg. 7260-7268.

Within weeks of the Bush administration moving into the White House, implementation of the 2001 Rule was delayed and eventually reversed. Concurrent to the Bush administration's reversal, the International Snowmobile Manufacturers Association (ISMA) brought suit against the Secretary of the Department of the Interior on grounds that the NPS had violated the Administrative Procedure Act (APA), NEPA, and the NPS Organic Act. The State of Wyoming joined the suit as an intervener on behalf of ISMA, and the Greater Yellowstone Coalition (GYC) intervened on behalf of the NPS and Department of the Interior (DOI). This case resulted in a settlement that claimed to "further the purposes of NEPA" by requiring a supplemental EIS (SEIS) be prepared that

⁵ The term 'snow-vehicle' is used throughout the document to refer to both snowmobiles and snowcoaches together.

would consider new snowmobiling technology such as cleaner and quieter snowmobile engines 68 Fed.Reg. 69268-69289.

The 2003 Winter Use Management Plan

In 2002, the NPS issued a draft of the SEIS that received over 100,000 comments during the required public comment period. Despite the majority of commentators supporting the alternative that would implement a complete ban on snowmobile use within the park, in 2003, the NPS finalized a new rule that permitted snowmobiles within YNP. The 2003 Rule allowed up to 950 snowmobiles to enter YNP each day, but the rule also stipulated that there would be a 20% limit on unguided visitors to the Park along with required snowmobile emission standards established by the NPS 68 Fed.Reg. 69268-69289 (National Park Service, 2003).

Before the end of the year, the Fund for Animals et al., filed suit against Gale Norton et al. in the U.S. District Court for the District of Columbia contending that the 2003 Rule violated the NPS' conservation mandate. The court noted that the 2003 Rule promulgated a new position for the NPS that was a "180° reversal" from their conclusions in the 2001 Rule, *The Fund for Animals, et al. v Gale Norton, et al., Greater Yellowstone Coalition, et al., v Gale Norton et al.*, 294 F. Supp. 2d 92 (D.D.C. 2003). The court continued that a reversal of an agency's views, especially within a short timeframe, requires the Federal agency to offer a reasoned explanation for the change *Id.* The NPS claimed that the new cleaner and quieter snowmobiles enabled them to reverse their 2001 snowmobile ban, but the court was not persuaded. The court noted that the NPS had written in their 2001 Rule that, "cleaner, quieter snowmobiles would do little, if

anything, to reduce the most serious impacts on wildlife” Id. The court questioned how the NPS, after spending years studying the effects of snowmobiles in YNP to conclude in the 2001 Rule that snowmobiles would be banned, could, only two years later, disregard their scientific findings and reverse their position. The court noted that the NPS’ policy reversal, which was “conspicuously timed with the change in presidential administrations,” was insufficiently explained and justified *Fund for Animals v Norton* (2003).

In deciding the case, the District Court of D.C. vacated and remanded the 2003 Rule. The court concluded that the 2001 Rule had been decided on the scientific finding that snowmobile use violated the NPS’ Organic Act due to the negative impacts on the Yellowstone ecosystem and its impairment of the enjoyment of the park. The court ruled that the NPS failed to supply a reasonable explanation for its snowmobile policy reversal from the 2001 to 2003 Rule and had therefore acted arbitrarily and capriciously Id.

The D.D.C. found that the NPS, in promulgating the 2003 Rule, had prioritized the snowmobilers and the businesses that serve them. In the court’s ruling, the 2003 Rule was thrown out and the 2001 Rule was reinstated while other management alternatives were being considered. In the court’s decision, it declared that the NPS has a “clear conservation mandate” that “trumps all other considerations.” It reasoned that this mandate was disregarded in the politically driven 2003 Rule that violated Executive Orders 11644 and 11989 that ban snowmobile use if adverse effects from ORV use are discovered *Fund for Animals v Norton* (2003).

Shortly after the court's ruling in the Fund for Animals v Norton, a lawsuit was brought against Gale Norton and the Greater Yellowstone Coalition et al. by the International Snowmobile Manufacturers Association and the State of Wyoming et al. The Wyoming District Court where the case was heard, found that the Park Service had violated NEPA and the APA. The state of Wyoming intervened as a plaintiff on the grounds of socioeconomic concerns that the snowmobile ban would cause great economic hardship for the businesses in the Yellowstone gateway communities that were dependent upon snowmobiling tourism International Snowmobile Manufacturer's Association; State of Wyoming, v Gale Norton; Greater Yellowstone Coalition 304 F. Supp. 2d 1278 (D. Wyo. 2004).

The D. Wyo. found that the NPS, in deciding to ban snowmobile use, (2001 Rule) but still permit snowcoaches to enter YNP, failed to consider the added air pollution and noise emitted by the anticipated increase in snowcoach use. Due to the absence of this consideration, the D. Wyo. concluded that the agency had violated NEPA. Furthermore, the court ruled that the NPS had also violated NEPA when they deprived the public from sufficient commentary voice when they issued their final winter use rule only one day after the end of the comment period Id.

Concerning the grounds of the APA claim, the court found that the NPS failed to adequately explain its sudden banishment of snowmobiles after thirty-seven years of their permittance. Finally, the court also found that the NPS had violated the APA by not allowing for adequate public participation Id.

Though the 2001 Rule was vacated by the Wyoming District Court on the grounds that the Rule violated both NEPA and the APA, the court determined that the 2001 Rule did not violate the NPS Organic Act. The court specifically stated that the 2001 Rule was a valid decision by the NPS within its discretionary mandate to protect the park's resources *ISMA v Norton* (2004).

The 2004 Temporary Winter Use Management Plan

Due to the invalidation of the 2001 Rule by the Wyoming District Court and the invalidation of the 2003 Rule by the D.C. District Court, management of YNP by the NPS in the winter of 2003-2004 was understandably difficult and chaotic. Two conflicting winter use management plans were used at different times throughout the winter which caused significant confusion for all parties involved. Because of this confusion, the D.D.C. removed its ruling to reinstate the 2001 Rule and ordered the NPS to instead prepare a new rule for the following 2004-2005 winter that would align with the 2003 opinion by the D.D.C. This led to the issuance of the temporary 2004 Rule that would set winter use limits and regulations for the next three winter seasons (through the winter of 2006-2007) 69 Fed.Reg. 65348-65366.

The 2004 Rule allowed a maximum of 720 snowmobiles per day to enter YNP and all snowmobilers had to be part of a commercially guided group that could be no larger than eleven people *Id.* Though it was only for three years, it temporarily clarified current management practices and afforded the NPS to have clear directives while they were in the midst of preparing a long-term EIS and winter use plan.

However, despite the temporary status of the 2004 Rule, the involved parties were not placated by the Rule. Within a week of the publication of the 2004 Rule, both the Fund for Animals and the Wyoming Lodging and Restaurant Association (WLRA) filed claims challenging the validity of the Rule. The Wyoming Lodging and Restaurant Association, a Wyoming nonprofit group, and the State of Wyoming as a plaintiff-intervener, brought suit against the U.S. Department of the Interior (DOI) and the National Park Service et al. and was a case filed in the U.S. District Court of Wyoming in October, 2005. As part of the 2004 Winter Use Plan process, an Environmental Assessment had been conducted to evaluate the impacts of winter use in YNP and this resulted in a finding of no significant impact (FONSI) of the 2004 Rule. Within the opening paragraphs of the court's ruling, the D. Wyo. summed up the past several years, "As one might expect, the issuance of the 2004 EA, the 2004 finding of no significant impact (FONSI), and the 2004 Temporary Rule sparked more litigation in this ongoing saga" (emphasis added) *The Wyoming Lodging and Restaurant Association; State of Wyoming v U.S. Department of the Interior; National Park Service; Gale Norton* 398 F. Supp. 2d 1197 (D. Wyo. 2005).

In *WLRA v DOI*, the WLRA and State of Wyoming challenged the FONSI, EA and the 2004 Rule on the grounds that they all violated NEPA and the APA. The Wyoming District Court (the same court that had invalidated the 2001 Rule that banned snowmobile use two years earlier) found that the NPS had complied with both NEPA and the APA Id. The court ruled that the NPS had considered a reasonable number and range of alternatives and taken a 'hard look' at the potential impacts of the 2004 Rule's

regulations Id. Additionally, the court found that the 2004 Rule requirement for snowmobilers to be accompanied by an official guide did not violate the APA because the DOI had supplied sufficient evidence that the guide requirement reduced audibility levels, animal death, and law enforcement cases involving snowmobilers *The Wyoming Lodging and Restaurant Association v U.S. Department of the Interior* (2005).

On the other side of the park preservation versus snowmobiling debate, the Fund for Animals and Greater Yellowstone Coalition et al. brought a case against Gale Norton in the D.D.C. that was decided in September, 2005. The plaintiffs (a coalition of environmental groups) were attempting to indirectly have the 2004 Rule vacated by having the D.D.C. enforce its December, 2003 ruling that had vacated the 2003 Rule and reinstated the 2001 Rule. The court noted that though the lawsuit was essentially a challenge to the validity of the 2004 Temporary Rule, the plaintiffs had not styled their case in such a manner. The court ruled that because the 2004 Rule was a new final agency action that had resulted from a more recent rule-making process with an EA and the resulting FONSI, therefore, a new lawsuit by the Fund for Animals would be required to challenge the 2004 Rule. Because these were not the issues before the court, the motion by the Fund for Animals et al. was denied by the court and the 2004 Rule remained valid *The Fund for Animals; Greater Yellowstone Coalition v Gale Norton* 390 F. Supp. 2d 12 (D.D.C. 2005).

The 2007 Winter Use Management Plan

In December, 2007, the NPS published its next winter use management plan (2007 Rule). By addressing the concerns of previous plans and court rulings, the plan

attempted to provide long-term management guidance for the NPS. During the first winter of 2007-2008, under the regulations of the new Rule, 720 BAT⁶ snowmobiles and 78 snowcoaches were permitted to enter the Park each day and they were required to operate only on the groomed park roads 72 Fed.Reg. 70781-70804. During the next winter of 2008-2009, the 2007 Rule reduced the permitted number of snowmobiles to 540 BAT snowmobiles that were required to be accompanied by a commercial guide and in groups no larger than eleven snowmobiles. However, the number of permitted snowcoaches increased to 83 per day. All vehicles were still required to stay on the groomed NPS roads Id. The 2007 Rule also included ‘adaptive management’ language that enabled NPS management to quickly adjust permitted access as it responded to the results of monitored impacts on wildlife protection, air quality and soundscape criteria within the Park Id.

As had become customary in the ongoing saga, as soon as the 2007 Winter Use Rule was published, lawsuits were filed by parties on either side of the snowmobile use debate. In the D.C. District Court, numerous claims were consolidated so when the case was eventually heard in September of 2008, the plaintiffs included many of the nation’s prominent environmental groups; they included: the Greater Yellowstone Coalition, the Wilderness Society, the Natural Resources Defense Council, Winter Wildlands Alliance, the Sierra Club, and Earthjustice. They claimed that Dirk Kempthorne; the National Park Service; and the U.S. Department of the Interior had violated the NPS Organic Act,

⁶ A BAT snowmobile is a “best available technology” snowmobile that minimizes noise and air pollution. It is the duty of the NPS to publish and continually update the list of acceptable BAT snowmobiles.

NEPA and the APA in their issuance of the 2007 Rule that allowed any snowmobiling in YNP. They argued that the 2001 Rule outlawing all snowmobiling in the Park should be reinstated and promulgated *The Greater Yellowstone Coalition v Kempthorne* 577 F. Supp. 2d 183 (D.D.C. 2008).

During the lawsuit, the NPS and environmental groups disagreed over the interpretation of the conservation mandate within the NPS' Organic Act. According to the court document, § 1.4.3 of the 2006 NPS Policies states that:

“The fundamental purpose of the national park system, established by the Organic Act...begins with a mandate to conserve park resources and values. This mandate is independent of the separate prohibition on impairment and applies all the time with respect to all park resources and values, even when there is no risk that any park resources or values may be impaired. NPS managers must always seek ways to avoid, or to minimize to the greatest extent practicable, adverse impacts on park resources and values. However, the laws do give the Service the management discretion to allow impacts to park resources and values when necessary and appropriate to fulfill the purposes of the park, so long as the impact does not constitute impairment of the affected resources and values. *The Greater Yellowstone Coalition v Kempthorne* (2008).

The defendants claimed that the conservation mandate is only triggered when the impacts from a particular action or use are above the level of “unacceptable impacts.” So the NPS argued that snowmobiling should be permitted until unacceptable impacts are discovered at which point snowmobiling would then be in conflict with the conservation mandate, thereby necessitating the banishment of their use in YNP. Furthermore, the NPS claimed that the final sentence of the 2006 NPS Policies section (supra) as well as the Organic Act allowed adverse impacts if they were deemed “unavoidable and appropriate” *Id.*

The plaintiff environmental groups vehemently disagreed with the NPS' interpretation of their conservation mandate and claimed that the NPS had failed to justify their actions and to fulfill numerous requirements. The environmental groups said that the NPS had not justified why snowmobiling was "necessary and appropriate" to satisfy the statutory purposes of YNP. Finally, the Greater Yellowstone Coalition et al. claimed that the NPS had not explained how they were planning to minimize the adverse impacts of snowmobiling on the park and its resources Id.

The plaintiffs argued that within the past three years, the NPS regularly failed to respond to environmental thresholds that they themselves had determined and established. The environmental groups claimed that the "adaptive management" practice specified in the 2007 Rule was inadequate to mitigate adverse impacts on air quality and soundscapes within the Park. Particularly damning was Earthjustice highlighting the fact that though 540 snowmobiles would be permitted to enter YNP on a daily basis under the 2007 Rule, the then current average of 250-300 snowmobiles that entered YNP each day, already exceeded the environmental thresholds established by the NPS. However, as Earthjustice noted, even though the environmental thresholds were being exceeded, it failed to prompt the NPS to implement any adaptive management and mitigation measures Id.

The D.D.C. ultimately vacated and remanded the 2007 Rule. The court held that the NPS failed to justify its claim that snowmobiling would have acceptable environmental consequences. The NPS also failed to supply scientific analysis to support its finding that the 2007 Rule would not create unacceptable impacts on YNP's resources.

Finally, the court concluded that the conservation mandate in the NPS' Organic Act is paramount and that the same interpretation has routinely been identified by other federal courts. The D.D.C. ruled that the NPS had prioritized snowmobile use over conservation and failed to administer the park in such a manner to fulfill its statutory purposes *Id.*

At the same time the environmental groups brought their claims against the 2007 Rule, the State of Wyoming, Park County (WY), ISMA, the American Council of Snowmobile Associations, and the Blue Ribbon Coalition (a pro-recreation group) brought suit against the Department of the Interior in the Wyoming District Court claiming that the 2007 Rule restricted access to YNP and should be overturned to allow additional snowmobiling. Just weeks after the D.C. District Court issued their judgment and vacated the 2007 Rule, the District Court of Wyoming ruled on the case brought about by the State of Wyoming and the ISMA et al. The D. Wyo. ordered the NPS to reinstate the 2004 Rule that permitted 720 snowmobiles per day. The District Court claimed that the local businesses and tourists needed certainty and order during this time of "confusing litigation" *State of Wyoming; Park County; The International Snowmobiler Manufacturer's Association; U.S. Department of the Interior Nos. 07-CV-0319-B, 08-CV-0004-B (D. Wyo. 2008).*

The D. Wyo. also voiced their dismay that the D.D.C. had heard the Greater Yellowstone Coalition case in the first place. The D. Wyo. lamented that they had established the jurisdiction of the parties and issues prior to the D.D.C. and according to the "principles of comity that the first federal district court which obtains jurisdiction of parties and issues should have priority and the second court should decline consideration

of the action until the proceedings before the first court are terminated” State of Wyoming v the DOI (2008). Furthermore, the Wyoming District Court expressed their disappointment that a court “sitting over 2,000 miles away from the actual subject of this litigation feels compelled to hand down a ruling affecting land that lies in this Court’s backyard” Id. In the spirit of comity, the D. Wyo. requested that the D.D.C. transfer all future YNP snowmobiling cases to Wyoming Id.

The timing of the related cases being heard in Washington D.C. and Wyoming was critical because the D.D.C. ultimately ruled first. This placed pressure on the D. Wyo. to issue a ruling that, in the spirit of comity, was in agreement with the D.D.C.’s finding. So even though the D. Wyo. disagreed with the D.D.C.’s ruling, the D. Wyo. had “no power or authority to amend, modify, or revoke an order of another United States District Judge” and felt obliged to respect the ruling and leave it undisturbed Wyoming v the U.S. Department of the Interior.

The 2008 & 2009 Winter Use Management Plans

Pursuant to the Wyoming District Court’s ruling, the NPS issued a new winter use management plan in December of 2008 that would provide interim relief while a final winter use plan was prepared. The 2008 Rule aligned closely with the 2004 Rule and allowed up to 720 guided snowmobilers to enter YNP each day. In addition, 78 snowcoaches were also permitted in the Park 73 Fed.Reg. 74,606-74,612. As had become customary, as soon as the NPS issued their 2008 Winter Use Plan, the State of Wyoming and snowmobiling advocate groups filed a suit against the NPS in the

Wyoming District Court and claimed that the 2008 Rule was too stringent in only permitting 720 snowmobilers per day.

However, this case was thrown out in the court of appeals when the NPS issued yet another temporary plan in November of 2009. The U.S. Court of Appeals, 10th Circuit, found that because the NPS had issued a newer regulation that replaced the challenged 2008 Rule, the case had become moot because the court couldn't offer the parties any effective relief State of Wyoming; Park County; The International Snowmobile Manufacturer's Association; American Council of Snowmobile Associations; Blue Ribbon Coalition v U.S. Department of the Interior; the National Park Service; National Parks Conservation 587 F. 3d 1245 (10th Cir. 2009). The newest management plan from the NPS, the 2009 Rule, drastically reduced the number of daily permitted snowmobilers from 720 to 318 through the 2010-2011 winter season 74 Fed.Reg. 60159-60183. It is important to note that the timing of the policy change and reduction of permitted snowmobiling published in the 2009 Rule corresponds with the presidential transition from the Bush administration to the Obama administration.

Unsurprisingly, the pro-snowmobiling contingency of Park County (WY), the State of Wyoming, and the International Snowmobile Manufacturer's Association filed claims in the District Court of Wyoming and asserted that the 2009 Winter Use Management Plan violated NEPA, the APA, the Yellowstone National Park Act, the National Park Service Organic Act as well as the United States Constitution. The National Parks Conservation Association joined the litigation as an intervener on behalf of the Department of the Interior and argued that the plaintiffs' claims of economic injury

due to lost tax revenue income had no standing. The court ruled in favor of the defendants stating that “their claims must be dismissed for lack of subject matter jurisdiction” because their supposed injuries “are speculative, conjectural, and hypothetical” Park County; State of Wyoming; International Snowmobilers Manufacturer’s Association v U.S. Department of the Interior; National Park Service; The National Parks Conservation Association Nos. 09-CV-262J, 09-CV-272J (D. Wyo. 2010). The Court ruled that the plaintiffs had no grounds for standing under Article III of the US Constitution Id.

Undeterred, Park County et al. brought an appeal of the District of Wyoming’s ruling to the 10th Circuit U.S. Court of Appeals. The court of appeals affirmed the D. Wyo.’s ruling that the pro-snowmobiling party had insufficiently supported their claim of economic injury and lacked standing in the case State of Wyoming; Park County; International Snowmobiler Manufacturer’s Association et al. v U.S. Department of the Interior; National Park Service; National Parks Conservation Association et al. 674 F.3d 1220 (10th Cir. 2012). Furthermore, the court pointed out that in recent winters, average snowmobiling visitation to YNP was well below the maximum permitted 318 persons per day and trending downwards in recent winters. For the 2007-08 through 2010-11 winters, daily snowmobile entries to YNP went from 294, to 205, 187, and 194 respectively Id. Petitioners argued that visitation had exceeded 318 permittees on peak days during the 2008-2009 season, and they attributed the reduced seasonal averages to the commercial guide requirement Id. However, the 10th Circuit Court was not persuaded

and claimed that the petitioners lacked evidence and concluded that the petitioners had failed to fulfill their burden of proving “an injury in fact” Id.

The 2011 (Temporary) Winter Use Management Plan

While the D. Wyo. was in litigation, the NPS announced in January of 2010 that they intended to conduct an EIS and publish a winter use plan that would administer guidance for the next twenty years. The alternatives considered in the EIS published in the 2011 Draft Long-Term Winter Use Plan ranged from a complete ban on all motorized snow-vehicles to permitting up to 78 snowcoaches and 720 commercially guided BAT snowmobiles on a daily basis (National Park Service, 2011). Before a finalized long-term plan could be properly issued and promulgated, in September, 2011, the NPS announced that they would delay publication of the long-term plan for one year and instead issue a temporary 2011 Rule that would guide winter use for the 2011-2012 season while they continued to work on the long-term plan. The 2011 Temporary Rule permitted 78 commercially guided snowcoaches and 318 commercially guided BAT snowmobiles per day in YNP Id. It is unclear what prompted the NPS to delay the issuance of a long-term winter use plan in 2011, but along with the publication of the 2011 Temporary Rule, they reiterated their intentions to finalize a SEIS and an YNP Long-Term Winter Use Plan prior to the 2012-2013 season.

Several months later, the NPS presented new winter use alternatives and opened them up for public review and comment. The alternatives draft of the SEIS received more than seventy thousand comments from the general public, over half of them calling for a complete ban of snowmobile use in YNP (National Park Service, 2015a). During

this comment period, The Greater Yellowstone Coalition continued to voice their support for snowcoach use rather than snowmobiles and they reiterated their concern that even a few snowmobiles would still have negative impacts on the wildlife and natural soundscape of YNP. Countering the Greater Yellowstone Coalition, the Blue Ribbon Coalition pushed for the allowance of non-commercially guided snowmobilers to enter YNP. They also wanted the NPS to issue another temporary winter management rule similar to the 2011 Rule to give local gateway community businesses additional time to prepare themselves for the long-term winter use plan Id.

Conclusion

After nearly two decades of expensive litigation and national debate, the NPS published a supplemental final EIS and Record of Decision (ROD) for the Winter Use Plan for YNP in 2013. It was the sixth NEPA process that the Yellowstone NPS had engaged in since 2000. The ROD was signed in August of 2013 and the Final Rule was officially published in the Federal Register in October, 2013 78 Fed.Reg. 63069-63093. The rule took effect in November, 2013, but it wasn't until the 2014-2015 winter season that the old system permitting a maximum number of snow-vehicles per day was replaced by a more flexible (and more complex) framework of permitting 'transportation events.'

As detailed in the Federal Register, a transportation event is a single snowcoach or a group of snowmobiles with a maximum size of ten Id. The size of the group for transportation events may increase from a seasonal average of 7 to 8 for snowmobiles and from a maximum of 1 to 2 for snowcoaches, but the average size is not to exceed a seasonal average of 1.5 snowcoaches Id. This new framework enables commercial tour

outfitters to combine snowmobile and snowcoach trips so they can react with flexibility to fluctuating visitor demand whilst still preserving the Park's resources for future generations. The NPS claimed this new rule achieved the proper balance between preserving YNP's resources and allowing adequate access for winter recreation. The new rule allows up to 46 commercially guided snowmobile transportation events and four non-commercially guided events each day. The non-commercially guided tours are to have a maximum of five snowmobiles per group and only one non-commercial group can enter each Park entrance per day. Finally, the rule also requires that the snowmobile and snowcoach machines meet both sound and air emissions standards that are established by the NPS. The averages permitted in the 'transportation events' can increase if voluntary enhanced emission standards are adopted by snow-vehicle outfitters. This creates an incentive for commercial guides to adopt the newest snow-vehicle emission innovations and technologies.

The Yellowstone winter use management plan of 2013 remains the operating guidelines for the Yellowstone NPS today. Presently, litigation over winter use in YNP has finally come to an end after nearly two decades. In the 2013-2014 winter, nearly 300,000 people visited YNP and over 24,000 of them were snowmobilers and 22,000 of them were snowcoach passengers who visited Yellowstone to enjoy the winter wonderland (National Park Service, 2015c). Though the Yellowstone winter use debate is currently settled within the federal courts, there are still many dissatisfied and bitter stakeholders. For the NPS, it will surely not be their last challenge regarding their dual

mandate, to administer the park system in such a manner to provide both preservation and enjoyment.

APPENDIX C

EXPLORATORY POST FACTO ANALYSIS OF VISITATION
AND SOCIOECONOMIC IMPACTS PROJECTED IN THE
2004 TEMPORARY WINTER USE PLAN FOR YNP

Introduction

A post facto analysis is a comparison of the predicted against the realized impacts of a given project or management decision (Gramann, 1983). The analysis is an opportunity to ‘ground-truth’ the methods and models utilized to produce impact projections. This ensures the most reliable and accurate information is being supplied to decision-makers.

Under NEPA, the NPS is bound to publish an environmental assessment (EA) or environmental impact statement (EIS) regarding an action that may affect the quality of the human environment (Coggins et al., 2007). As part of these documents, impact projections on a wide range of subjects are often required. The publication of numerous EIS documents for the winter use management of YNP offers the opportunity to conduct a post facto analysis of the projected visitation and economic impacts to the gateway communities of YNP. A common challenge of post facto analyses is that the projection parameters often do not match what was implemented on the ground, in the real world. For a hypothetical example, the NPS may publish an EIS for YNP that claims visitation to the park will decrease by 50,000 people per winter if snowmobile quotas in the park were to be decreased from 540 to 180 snowmobilers per day. Then, midway through the winter, after the new plan has been implemented and quota decreased, a lawsuit by snowmobiling advocates is victorious and forces the NPS to abandon the 180 per day limit and revert back to the previous 540 snowmobilers per day. This type of scenario occurred frequently within YNP; the NPS would implement a new management plan with new snowmobile technology specifications or increased/decreased daily limits for

snowmachines and then shortly after implementation, the plan would be reversed.

Therefore all the previous impact projections would become irrelevant.

As Appendix B demonstrated, there were numerous management reversals and extensive litigation concerning winter use management within YNP. Therefore, most of the published impact projections were nullified as the on-the-ground management did not match the parameter assumptions utilized within the impact projections. The one exception was the 2004 Temporary Winter Use Plan. The 2004 Plan was written to guide management for just three consecutive winters and the 2004 Plan withstood the legislative attacks from either side of the debate. Therefore, for the winters of 2005 through 2007, the actual management criteria of YNP nearly matched those utilized in the impact projections published in the 2004 EIS and the opportunity for a post facto analysis was created.

The following appendix is organized into two sections. The first section covers the projected impacts to winter visitation through the western entrance as well as the entire park. The second section discusses the economic impact of the 2004 Temporary Winter Use Plan on the local economies surrounding YNP. The appendix finishes with a brief conclusion assessing the overall EIS projections.

Impact to Winter Visitation to YNP

Historically, the majority of snowmobilers entered YNP through the western entrance and the gateway community of West Yellowstone. As the popularity of snowmobiling increased, the town embraced snowmobiling throughout the Greater Yellowstone Area (GYA) and became identified as the “Snowmobile Capital of the

World” (Dustin & Schneider, 2004; Ring, 2002). Snowmobile rental companies and snowcoach tour businesses sprang up to support the burgeoning industry and transformed the local winter economy. Until the 1970s, West Yellowstone business owners had boarded up their windows and shutdown for the winter months, but now West Yellowstone had a new industry to service winter tourists (Eagle & Eagle, 1978; Shea, 2009). This section focuses on the projected visitation impacts discussed in the 2004 Temporary Winter Use Plan and compares them to what was actually observed in the GYA and the community of West Yellowstone. It is an exploratory post facto analysis that utilizes several secondary datasets to assess the accuracy of the EIS projections.

A part of the EIS for the 2004 Temporary Winter Use Plan assessed the potential impacts that different management alternatives would have on winter visitation to YNP. I created Figure 1 to illustrate historic winter visitation to YNP. It shows the increase in winter visitation to YNP from 1983 through 2002, before the implementation of the first round of snowmobiling restrictions. The trend line shows a strong positive slope indicating the rising popularity of visiting YNP in the winter months. Next, Figure 2 shows the immediate impact of the snowmobiling restrictions and winter management changes within YNP. The figure expands upon the previous time period in Figure 1, and includes the years 2003-2015 during the winter use management debate. The slightly negative slope of the trend line, compared to Figure 1, reveals the drastic impact of the snowmobiling and winter use restrictions on visitation to YNP.

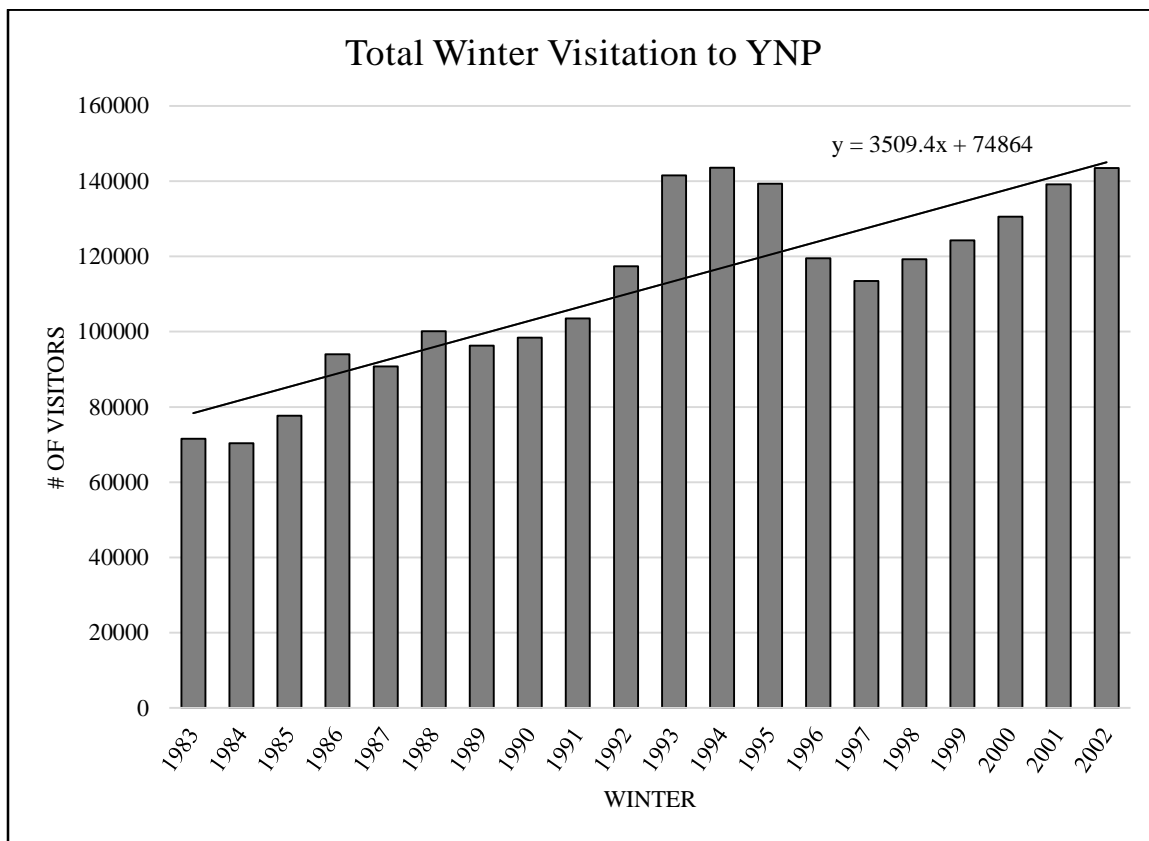


Figure 1 shows the overall increase in total winter visitation to YNP from the early 1980s through the early 2000s. A trend line is included to illustrate the rapid rise in winter visitation to the park. The visitation numbers were retrieved from the NPS visitor use division (National Park Service, 2015c).

As previously stated, winter visitation to YNP was, generally, increasing through the 1980s and 1990s (Figure 1). Part of this increase was due to snowmobiling in the park, but other winter activities were also ‘being discovered’ and becoming popular attractions for visitors. Since 1971, the NPS has groomed all the roads within YNP for oversnow use except the northern entrance is plowed for automobiles to drive to Mammoth (National Park Service, 2015a). Both of these accommodations made the northern entrance at Gardiner and the western entrance at West Yellowstone the two most popular entry points for YNP visitors in the winter (National Park Service Visitor Use

Statistics, 2016). In 1992, the NPS began collecting more detailed visitation data that recorded the mode of transportation for each visitor and the gate they entered.

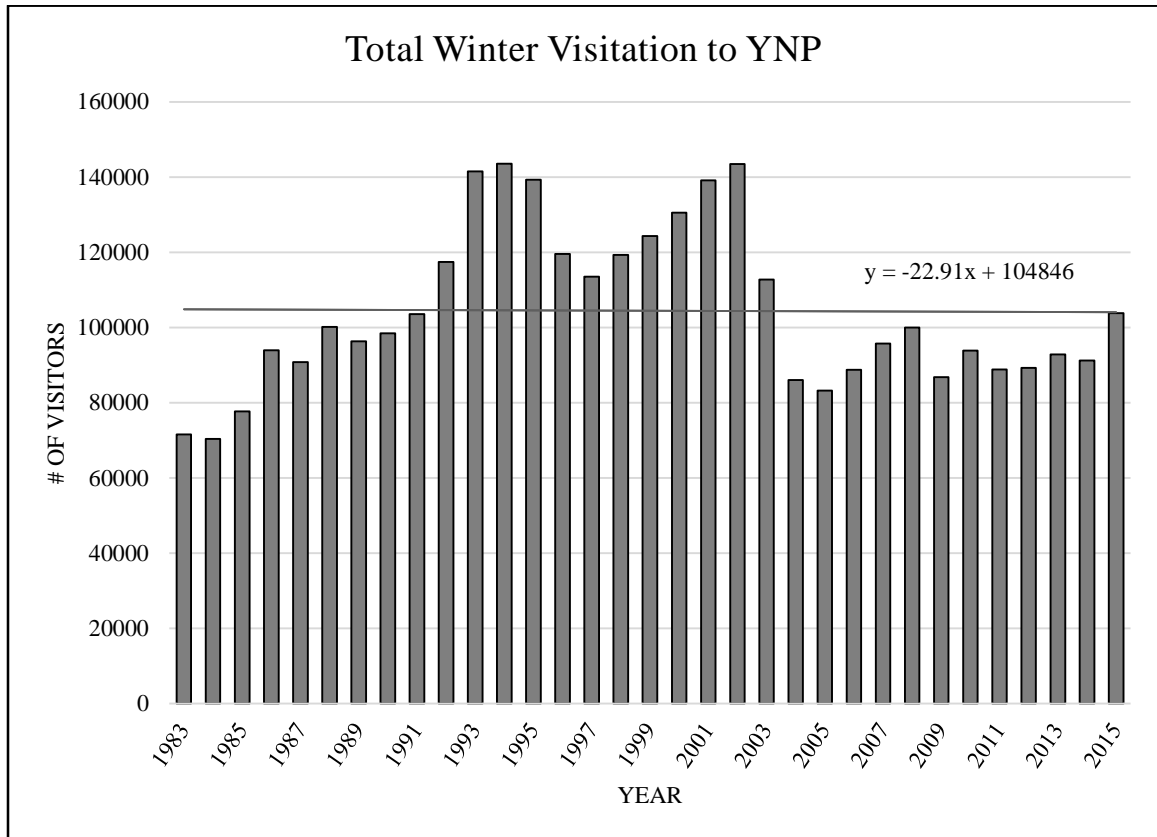


Figure 2 is an expansion of the previous Figure 1 that includes data from 2003 through 2015. After winter visitation peaked in 2002, the management of winter use in YNP changed and made snowmobiling more restricted throughout the park. The slope of the trend line is now negative indicating the lasting effect of the winter use restrictions and management uncertainty on visitation to YNP. Visitation numbers are from the NPS visitor use division (National Park Service, 2015c).

To study the impacts on West Yellowstone, NPS data specific to the western entrance of YNP was collected. Figure 3 is similar to the previous two depicting visitation to YNP, but Figure 3 is limited to visitors gaining access to the park through the western entrance. It includes the percentage of total winter visitors who entered YNP through West Yellowstone. Again, the immediate effect of the snowmobiling restrictions

is evident after visitation peaked in 2002. The total number of visitors to YNP was depressed by the decrease in visitation occurring through the west gate. In 2002, 70,371 visitors entered YNP through West Yellowstone. Just three winters later, in 2005, only 24,510 visitors entered through the same gate. More importantly, the number of winter visitors through West Yellowstone has failed to recover since 2004. In the winter of 2015, there were just 25,992 visitors who entered YNP through West Yellowstone. Since the debate of winter use management began over a decade ago, winter visitation through West Yellowstone has been stagnant.

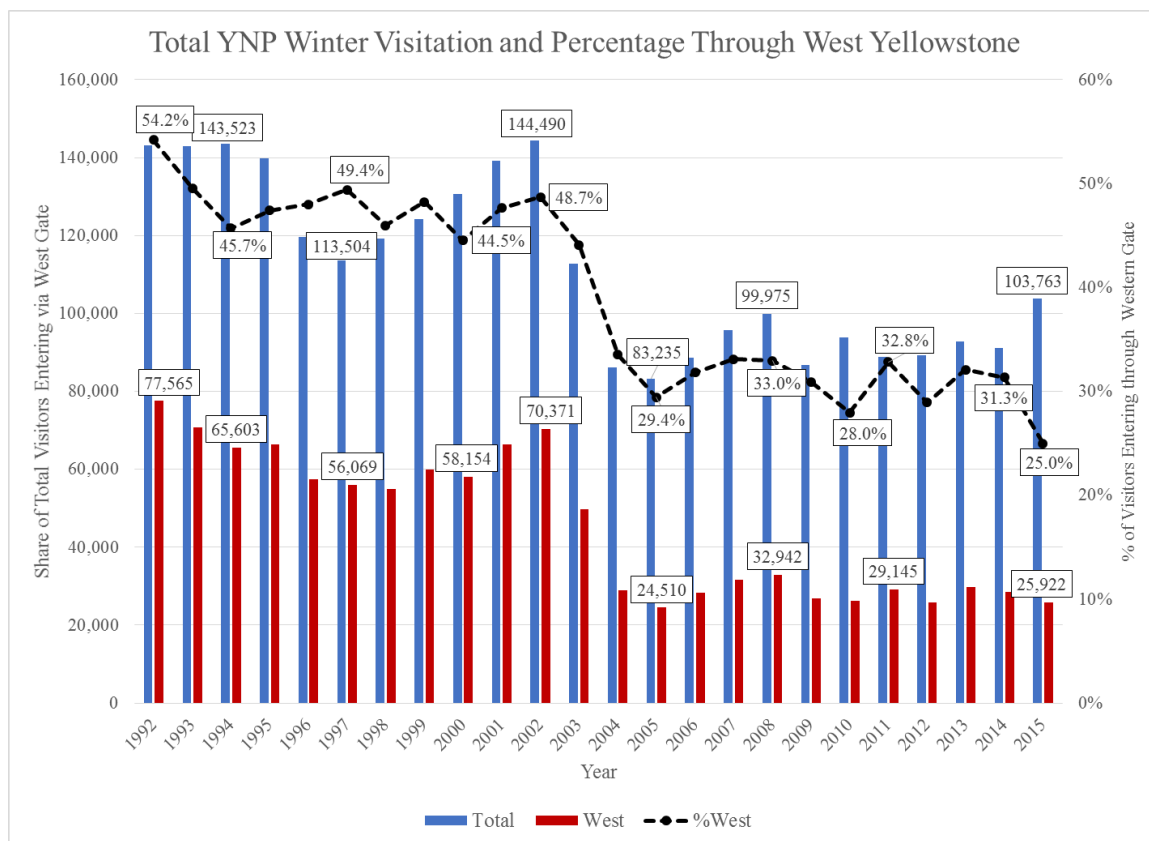


Figure 3 depicts the number of recreational visitors to YNP with the number and percentage of total visitors who entered the park through West Yellowstone and the western entrance.

The next figure (Figure 4) investigates the relationship between total winter visitation to YNP and the share of those visitors who rode snowmobiles. Figure 4 is a graph with total winter visitation, winter visitors who entered the park via snowmobile and the share of YNP snowmobilers who entered through West Yellowstone and the west gate. The figure reveals that total winter visitation to YNP (yellow line) in the 1990s was closely correlated with the number of snowmobilers (green line) who entered the park (correlation coefficient of 0.94). The majority of snowmobilers, roughly 70% (blue line), entered YNP through West Yellowstone (Figure 4). After the winter use management debate began and snowmobiling restrictions were implemented, the correlation coefficient decreased to 0.65 for the winters from 2003 through 2015. This indicates that the relationship between snowmobiling in YNP and overall winter visitation became less significant.

Figures 2 and 4 also show that in the mid-1990s, both snowmobiling and overall visitation to YNP dipped, but recovered by the end of the decade (Figure 4). This created a steep pinnacle from which snowmobiling and overall visitation plummeted after the winter of 2002. To quantify the impact of the snowmobiling restrictions on visitation to YNP through West Yellowstone, a historical baseline of winter visitation was required. This would establish a baseline from which the actual observed visitation figures could be compared.

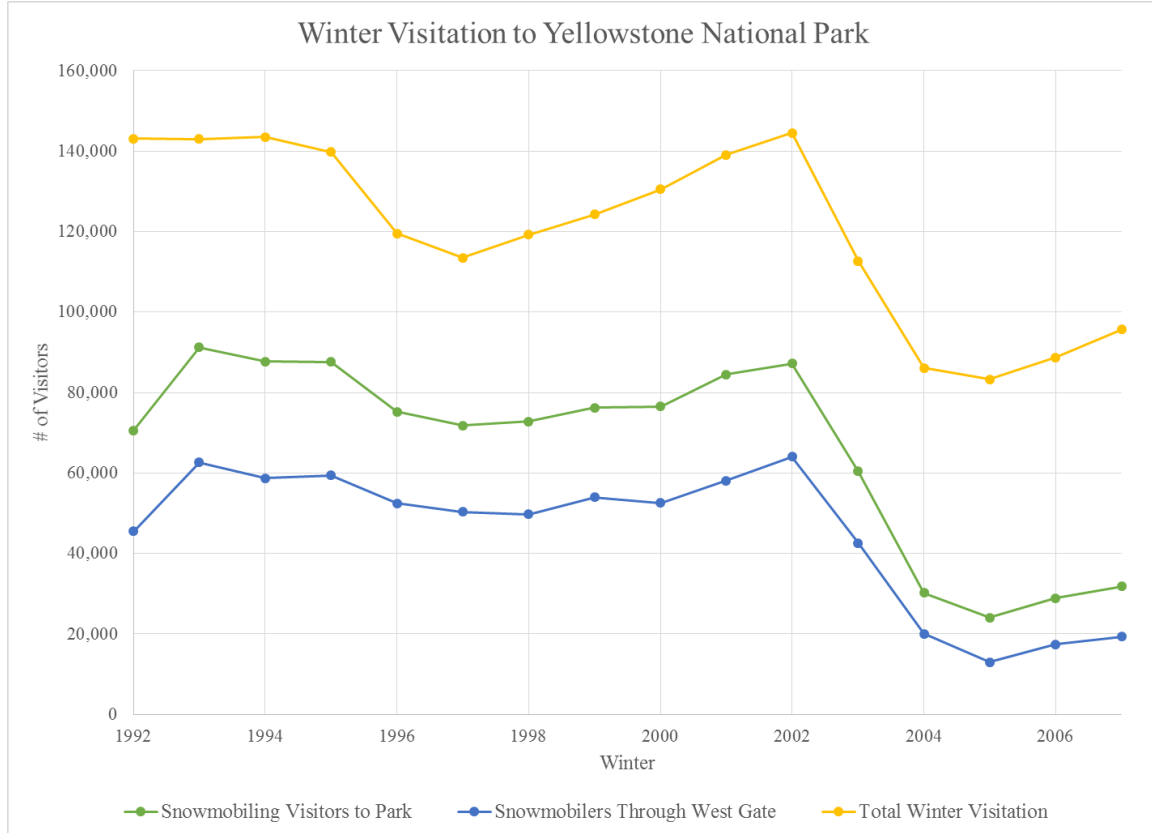


Figure 4 reveals that total winter visitation to YNP is highly influenced by the number of visitors entering the park via snowmobile. The correlation coefficient between these two variables is equal to 0.94 (1992 through 2002). By the winter of 2004, snowmobiling restrictions and management uncertainty greatly reduced the number of snowmobilers entering the park thereby dragging down overall winter visitation.

However, difficulties emerged as the NPS attempted to determine a baseline and project future visitation relative to the baseline. The time series available for winter use in the park was highly variable and relatively short with only twelve years of data detailing each visitors' primary winter use activity (since 1992). Furthermore, the possibility of looming winter use restrictions on snowmobiling in YNP evidently caused a spike in visitation in the winters of 2001 and 2002 (RTI, 2004). Visitors wanted to snowmobile in YNP before it was possibly banned forever. The two winters of 2001 and 2002 were followed by two winters of snowmobile limits, management contradictions,

and reversals which, coupled with bad snow years, drastically reduced visitation (RTI, 2004). Therefore, in determining the baseline for historical winter visitation, the NPS omitted the recent data from the winter of 2004 and utilized the five winters from 1998-1999 through 2002-2003 to calculate the hypothetical baselines. The projections calculate the visitation that would have been expected if there had been no modifications to the YNP winter use management since the 1990s. On the left hand side of Figure 5, it shows the visitation data from 1999 through 2003 that the NPS used to calculate the projected visitation baselines. On the right hand side of the graph, the projected visitation was broken into groups for each winter recreational category. The projections span the three years covered in the 2004 Temporary Winter Use Plan. Data from 2004 were omitted because the widespread uncertainty regarding winter use management within YNP caused visitation numbers to be significantly lower than historic levels.

In the winter of 2002-2003, RTI international, under contract by the NPS, conducted a Winter Use Visitor Survey (RTI, 2004; Mansfield et al., 2003). The results informed the projected changes in each of the winter use categories (snowmobiles, snowcoach, skiers/snowshoe and others) from the NPS snowmobiling restrictions. Though five alternatives were evaluated in the 2004 Temporary Winter Use EIS, this analysis only focuses on the projections pertaining to the preferred alternative that was published in the Federal Register and implemented for the three winters in the park from 2005-2007. The preferred alternative permitted up to 720 'BAT' (Best Available Technology snowmobiles that limited air and noise emissions) snowmobiles to enter YNP each day with specified limits for each entrance. The western entrance, abutting

West Yellowstone, was permitted 400 snowmobiles per day, the highest daily admission of any of the entrances. But with the new restrictions, all snowmobilers entering the park were now required to be part of a NPS certified guided tour (RTI International, 2004). The NPS anticipated that the guiding requirement would have a significant impact on visitation because the 2002-2003 Winter Use Survey results indicated that snowmobile owners, roughly 30% of all YNP snowmobiling visitors, would not visit the park if they were required to be a part of a guided trip. An insignificant number of snowmobile owners were expected to still travel to YNP and switch to snowcoaches to gain access to the park (RTI, 2004).

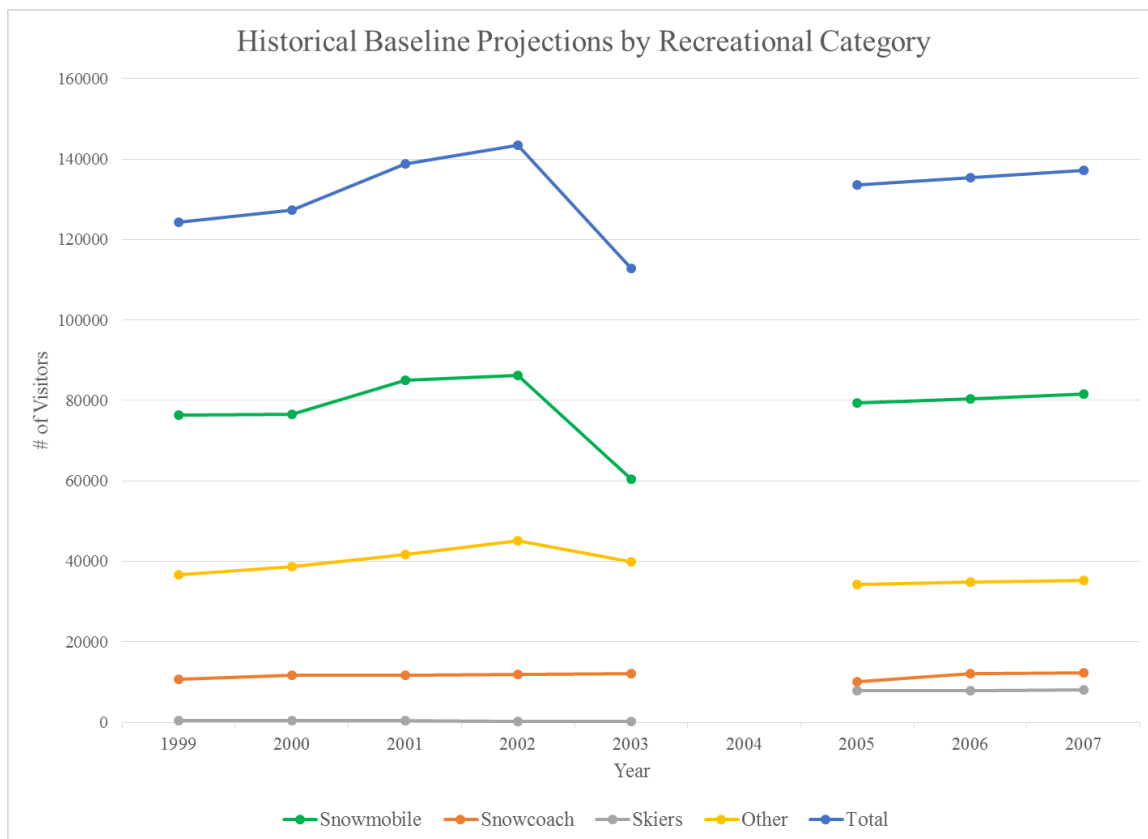


Figure 5 depicts the five winters (1999-2003) used to establish the baseline for projected winter use in the absence of any snowmobiling restrictions or change in winter use management of YNP. For the three winters projected (2005-2007) an annual growth rate of visitation was determined from visitor surveys and interviews with park officials and then applied to all winter use activities equally. There was a gap in the data centered on 2004 due to the heightened uncertainty surrounding winter use management that impinged visitation and was therefore excluded from the baseline calculations. For the three winters in which historic winter visitation was projected, the number of skiers increased dramatically because the tallies included the 5.85% of YNP visitors who traveled to the park to ski/snowshoe, but were entering the park by some other mode of transportation (typically via automobile). (The majority of the ‘other’ visitors were those driving an automobile through the north entrance near Gardiner, MT, the only YNP entrance plowed in the winter).

The results of the 2002-2003 Winter Use Visitor Survey informed the production of Table 1 that was published in the EIS and lists the anticipated absolute decrease in total visitation to the GYA. By NPS definition, the GYA spans across 20 counties and includes the surrounding gateway communities of YNP (National Park Service, 2015b).

The changes in visitation were spread across all four winter visitation categories as some categories (snowcoach and skier/snowshoe) were expected to experience an increase in participants. From the results of the Winter Use Visitor Survey, three different scenarios were created to present a range of visitation impacts. Scenario 2 depicts the actual survey results whereas Scenario 1 represents a 10% decrease in the number of snowmobilers and Scenario 3 a 10% increase in the proportion of snowmobilers expected to switch to one of the other visitor categories (RTI, 2004). Table 1 depicts the projected decrease in winter visitation under the preferred alternative that most closely matched the management scenario implemented by the NPS in the three winters from 2005 through 2007.

Estimated Decrease in Winter Visitation (2005-2007)			
Winter	Scenario 1	Scenario 2	Scenario 3
2005	-15,750	-17,380	-18,990
2006	-15,920	-17,560	-19,180
2007	-16,080	-17,730	-19,350

Table 1 is adapted from the 2004 EIS and shows the projected decrease in absolute visitation to the GYA for the three winters encompassed by the 2004 Temporary Winter Use Plan. The three different scenarios present a range from which to subtract visitors from the projected historical baseline depicted in Figure 5 (RTI, 2004).

In Figure 5, the projected number of visitors includes the percentage of snowmobile owners and renters that are still expected to travel to the GYA, but not enter YNP because of the new requirement to tour with a guide. For the businesses of West Yellowstone especially the lodging and dining establishments, it made little difference if the visitors traveled into the park or only utilized the surrounding National Forest trails. However, for the NPS, they would be negatively impacted by reduced park visitation due

to the decrease in entrance fee collections, a portion of which stays within the YNP budget (Loomis, 2002). The 2002-2003 Winter Use Visitor Survey informed the calculation of the percentage of visitors who would still travel to the GYA, but not enter the park (Mansfield et al., 2003). For the winter of 2004-2005, under Scenario 2, it was projected that 26.6% or roughly 6,940 people who owned snowmobiles would still travel to the GYA, but not enter the park. As for the snowmobile renters, 20.3% or 11,330 snowmobile renters were expected to still travel to the GYA, but not enter the park (RTI, 2004). Therefore, the projected number of YNP visitors would be less (compared to GYA visitors) than what is depicted in the graph and be relatively close to the observed visitation figures, though the projected visitation was still a little above the observed numbers. But it is important to still consider the unguided snowmobiling visitors within the projections because the EIS assessment assumes that these visitors will still travel to the GYA. Therefore they will still travel to the gateway communities, spend time and money, and lessen the economic impact of Yellowstone's winter use restrictions.

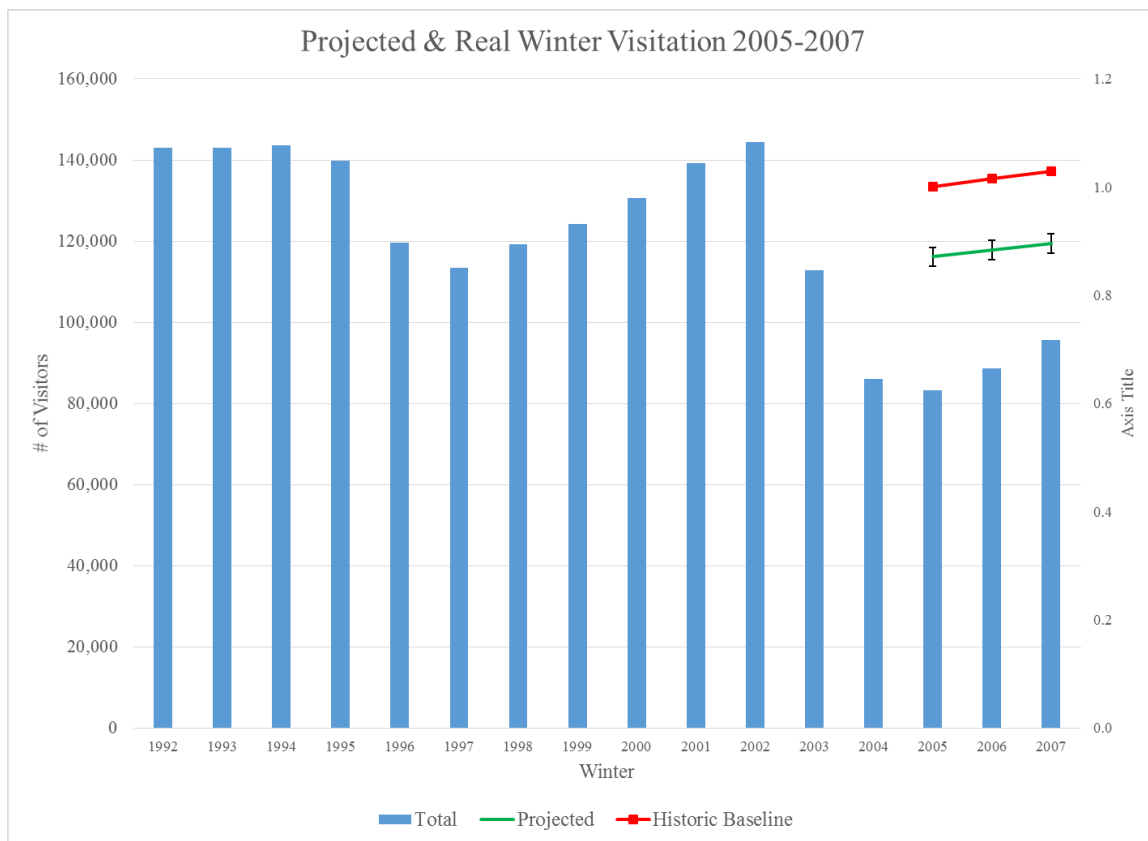


Figure 6 shows the observed number of YNP winter visitors along with the projected historical baseline in the absence of snowmobiling restrictions and the projected number of visitors for the 2005, 2006 and 2007 winters under the management of the 2004 Temporary Winter Use Plan. The error bars indicate the +/- 10% impact calculated in scenarios 1 and 3 and displayed in Table 1.

To conclude, the projected visitation levels published in the 2004 Temporary Winter Use Management Plan were relatively close to levels observed in YNP. Compared to the historical baseline of visitation, a significant decrease in visitation was anticipated and realized. A portion of previous YNP visitors were expected to still travel to the GYA, but not enter the park via snowmobile. It was anticipated that these individuals would utilize the snowmobiling trails throughout the surrounding national forests. The next section will evaluate the projected economic impacts of the reduced visitation to YNP and the GYA.

Economic Impact

Within the 2004 Temporary Winter Use Plan, the document acknowledged the heightened dependency of several gateway communities on visitation to YNP, but the official economic analysis area was a larger 5-county scale. The study area included Fremont County, Idaho, Gallatin and Park counties in Montana and Park and Teton counties in Wyoming (RTI International, 2004). Therefore all economic impacts analyzed were on the broader 5-county region and an impact projection limited to the scale of West Yellowstone was absent.

Because the impact projections included all the businesses of the 5-county Yellowstone region, a direct comparison to the West Yellowstone data is infeasible. That said, the impact projections for the GYA still provide a range from which the West Yellowstone bed taxes, resort taxes and visitation data can be compared. To calculate the losses in producer surplus (the costs to businesses) the projected decrease in the number of visitors to the GYA was multiplied by the average spending per visitor for each category. Then the change in total revenue associated with each visitation scenario was matched with the return-on-sales measure (profit margin percentage) for each D&B Standard Industrial Classification (SIC) code.⁷ The profit margins included a low and high end and ranged from 0.4% to 14.7% for categories including snowmobile rental

⁷ The D&B lower and upper quartile profit margins are: snowmobile and snowcoach rentals (SIC 7999) 3.90% - 8.7%; lodging (SIC 7011) 1.30% - 14.70%; restaurants and bars (SIC 5812) 0.60% - 7.50%; grocery stores (SIC 5411) 0.40% - 3.00%; gas and oil (SIC 5541) 1.10% - 3.10%; souvenir shops and other retail (SIC 5947) 1.10% - 9.90% (RTI, 2004).

businesses, lodging, restaurants and bars, gas and oil, and souvenir shops (RTI International, 2004). Below is Table 2 that was recreated from the 2004 Plan and depicts the estimated annual financial impact to producer surplus relative to the historic baseline calculated for the entire GYA for the winters 2005 through 2007.

Estimated Decrease in Producer Surplus, 2004-2005 through 2006-2007						
	Scenario 1		Scenario 2		Scenario 3	
	Low	High	Low	High	Low	High
2005	\$20,582	\$189,375	\$25,760	\$294,965	\$30,873	\$399,241
2006	\$20,853	\$191,951	\$25,876	\$292,737	\$30,822	\$392,428
2007	\$21,110	\$194,372	\$26,172	\$296,369	\$31,170	\$397,181

Table 2 shows the range of values for the projected decreases in producer surplus for each scenario considered in the 2004 Temporary Plan. The decreased producer surplus is relative to the historical baseline if no snowmobiling restrictions had been implemented. All dollar values were converted from 2003 to 2015 USD.

In a supplemental 2006 EIS, a regression model using West Yellowstone resort taxes and visitation through the west entrance calculated the average spending per YNP winter visitor who entered the park. The average spent per visitor on taxable goods and services in West Yellowstone was \$212.78 (2015 USD (U.S. Bureau of Labor Statistics, 2016)) (Duffield & Neher, 2006). Using the 3% resort tax, the average spending per visitor in West Yellowstone (\$212.78) and the projected GYA visitation (Figure 6, green line), I calculated the projected amount of resort taxes that would be collected within the GYA in the winters of 2005, 2006, 2007. The projected amount of tax revenue and actual amount of resort taxes collected in West Yellowstone are both listed in Table 3. It should be noted that the visitation projections applied to the entire GYA and not just West Yellowstone or YNP visitors, thus creating a scalar mismatch. Since there are numerous gateway communities within the GYA, the tax collections for the entire region

would have been higher than what was collected in just West Yellowstone. The resort taxes actually collected in West Yellowstone were less than what was anticipated in the EIS report. This indicates that the winter economy of West Yellowstone was more impacted than what had been anticipated and reported in the EIS for the 2004 Temporary Winter Use Plan.

Projected and Actual Resort Tax Collections (2005-2007)							
Scenario	Projected Resort Collections			Actually Collected	Difference		
	S1	S2	S3	Observed	S1	S2	S3
2005	\$585,833	\$575,428	\$565,151	\$468,069	\$117,764	\$107,359	\$97,082
2006	\$584,748	\$574,279	\$563,938	\$494,513	\$90,235	\$79,766	\$69,425
2007	\$583,726	\$573,194	\$562,853	\$522,579	\$61,147	\$50,615	\$40,274

Table 3 shows the difference in projected resort tax collections for the GYA and what was actually collected during the winter months in West Yellowstone. All three visitation scenarios are presented for the three winters covered by the 2004 Temporary Winter Use Plan (2015 USD).

The quarterly bed tax collected in West Yellowstone offers another method to evaluate the economic impact of the YNP winter use management decisions on West Yellowstone. Figure 7 is a graph illustrating two different taxes collected in West Yellowstone and the number of visitors entering the park through the western entrance. The bed taxes that were collected correspond only to the first quarter of each year (January through March). The West Yellowstone resort taxes are plotted on the secondary axis and include all resort taxes collected between December and March of each year and are reported in 2015 USD.

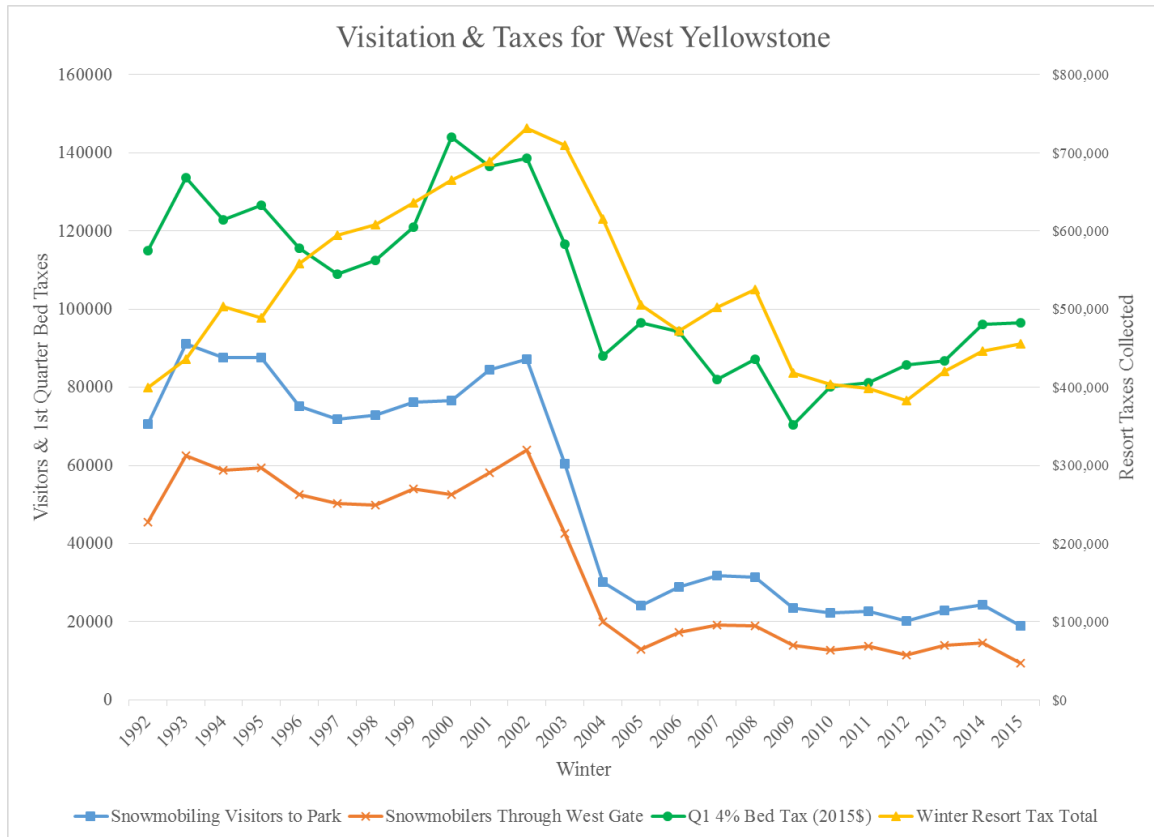


Figure 7 shows winter visitation to YNP through the western entrance with both the total number of visitors as well as the number of visitors who snowmobiled through the gate. After snowmobiles were restricted in YNP, a gap widened between total winter visitation and snowmobiling visitors. This is reflective of an increase in the number of tourists who visited the park from West Yellowstone via snowcoach. The resort and bed tax data for West Yellowstone are also graphed with the winter resort tax collections plotted on the secondary axis. The bed tax is the sum of money collected in West Yellowstone during the first quarter of each year (January through March).

Analyzing the graph, it is evident that West Yellowstone’s winter tax collections peaked in 2002 and were linked to the snowmobiling heyday in the 1990s and early 2000s. Subsequently, once the snowmobiling restrictions were implemented, visitation and tax collections decreased and still remain significantly below their peaks in 2002. In fact, the resort taxes collected in West Yellowstone were down nearly \$300,000 in the winter of 2015 from its peak of over \$731,000 in 2002 (2015 USD). Over the past few

years, both the resort tax and bed tax collections have experienced a slight rebound, but both snowmobiling and winter YNP visitation through the west entrance remain depressed. This would indicate that visitors are returning to West Yellowstone, but are recreating outside of YNP or that the cost of winter services in West Yellowstone has significantly increased thereby boosting the amount of taxes collected. A combination of the two is also possible, but the latter theory was an issue that was frequently raised during the interviews with West Yellowstone residents. In fact, the Winter Use Surveys conducted by the NPS and its contractors found that snowmobiling in the national forests surrounding West Yellowstone was a complement rather than a substitute to snowmobiling in YNP. After the YNP snowmobiling restrictions were implemented, snowmobiling in Gallatin National Forest decreased. This confirmed the survey results that suggested destination tourists who traveled to the GYA were primarily motivated by the desire to snowmobile in the park. YNP, packed with unique natural resources and opportunities, was the main attraction that motivated many snowmobiling enthusiasts to travel to the GYA, whereas the national forests were a secondary benefit of their trip (Duffield & Neher, 2006).

Though winter visitation to YNP through West Yellowstone remains below the tallies experienced in the 1990s and early 2000s, annual visitation to the park through the western entrance is recently surging. Figure 8 is an indexed version of the previous Figure 7 except winter visitation through West Yellowstone has been substituted for annual visitation through the west gate. The figure reveals the increase in annual visitation through the 2000s and the sharp uptick in visitation since 2013. The annual

increase in visitation is in contrast to the depressed indicators of winter visitation and tax receipts.

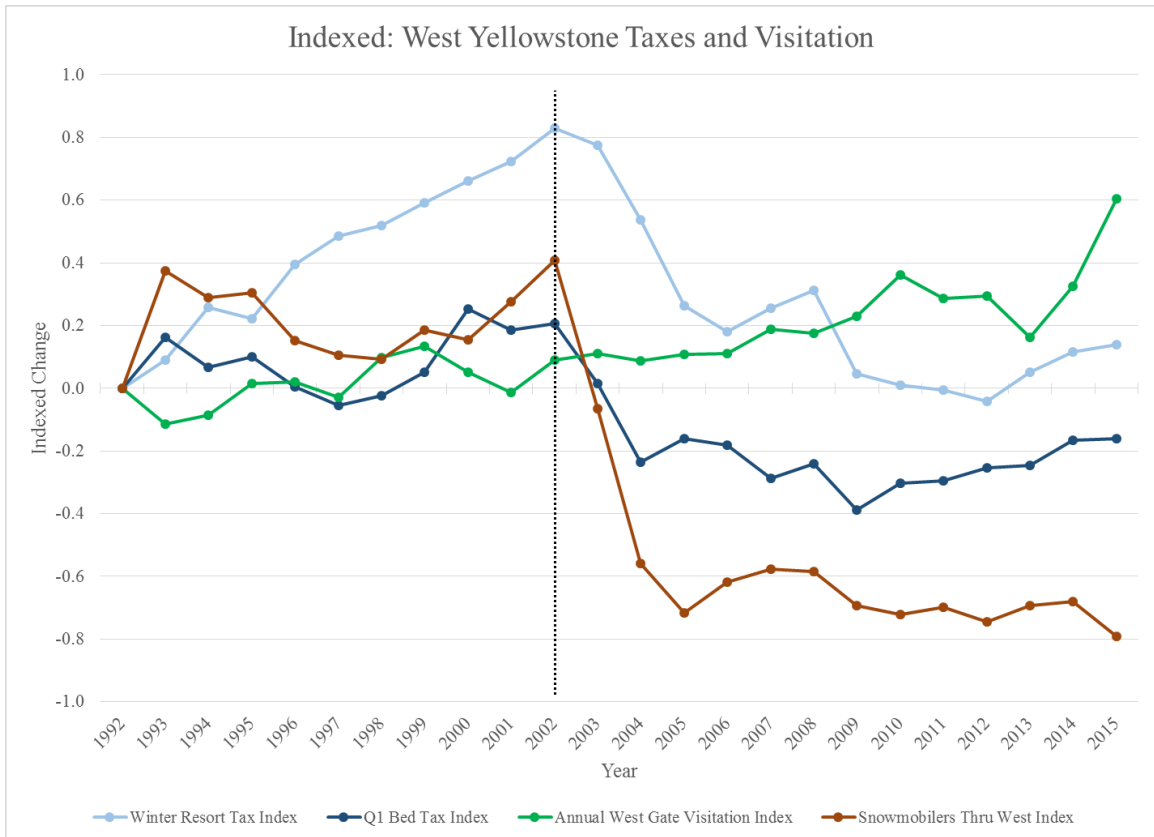


Figure 8 is an indexed graph depicting the decrease in snowmobiling through YNP’s western entrance and the drop in winter tax collections since the snowmobiling restrictions were implemented. While the winter economy of West Yellowstone is struggling, annual visitation to YNP through West Yellowstone is at an all-time high.

With the record number of West Yellowstone YNP visitors in 2015, annual resort tax collections set a new record. Figure 9 shows the increasing annual resort taxes collected in West Yellowstone over time, but also the stagnant resort taxes collected in the winter. Through the 1990s, both winter and annual resort taxes were increasing year after year, but then after the snowmobiling restrictions were implemented in 2003, the gap between the two quickly widened. It appears that the decrease in winter collections

dragged the annual collections down for the first few years in the mid-2000s, but after 2006, the annual total collected trended upwards while the winter amount decreased.

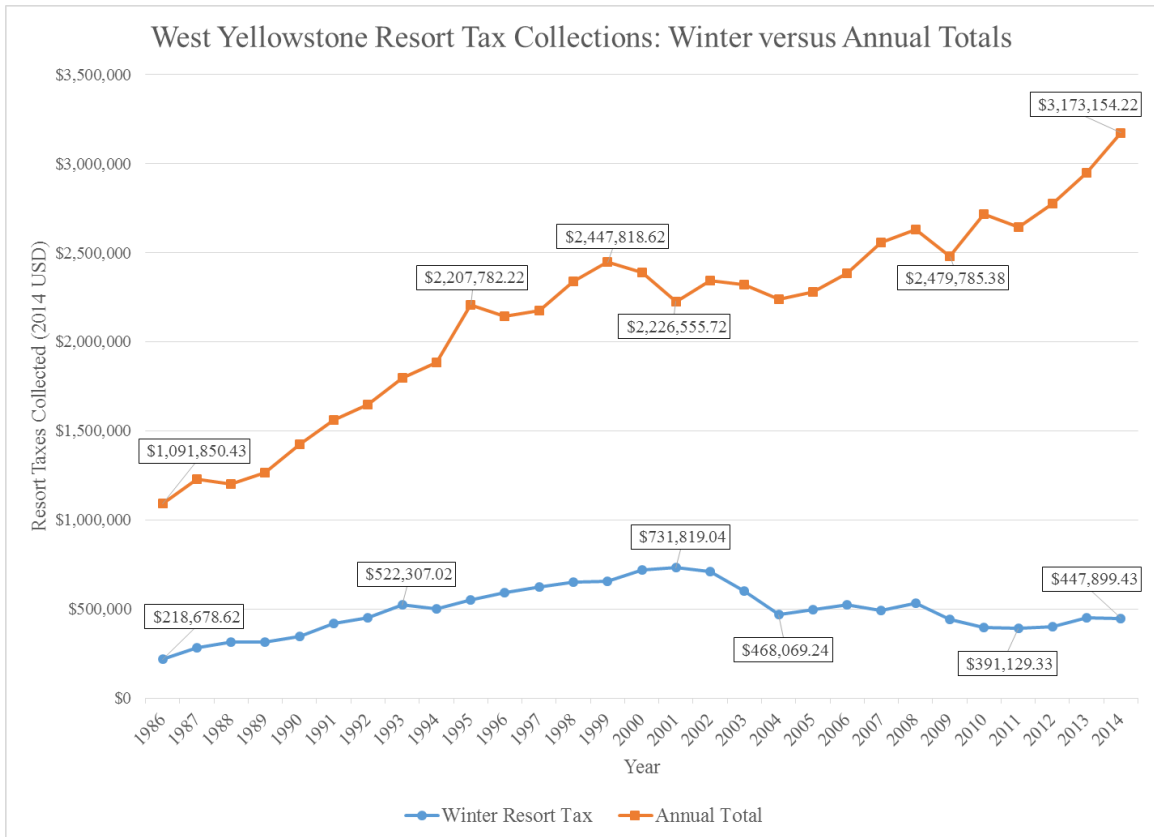


Figure 9 shows the resort taxes collected within West Yellowstone. Both the winter collections and the total annual collections are shown.

The observation that the annual resort taxes are increasing does not align with the NETS data or what some West Yellowstone residents revealed in their interviews. A possible explanation offered by several business owners may be that the cost of services within West Yellowstone are increasing much more rapidly than the rate of inflation. Another contributing factor may be that there roughly 200 more people residing within West Yellowstone than in the year 2000 (U.S. Census Bureau, 2015). These annual residents are purchasing groceries and gas within city limits and, just like the tourists,

contributing to the resort tax collections of West Yellowstone. Over the past few years, an unexplored space may have developed within gateway communities as nightly lodging facilities grew in popularity (e.g. Airbnb) and became established nationwide (Guttentag, 2015; Zervas, Proserpio, & Byers, 2015). It is unclear how much of this revenue the NETS database has captured in its records that are current through January, 2012.

In addition to the resort taxes collected in West Yellowstone, the quarterly bed taxes offer further insight to the effects of the winter management changes in YNP. The quarterly bed taxes are a 4% tax applied at all lodging establishments throughout the state of Montana. It is a proxy for the level of destination tourism occurring within West Yellowstone. Figure 10 is a graph showing the proportional contribution of each quarter to the annual amount collected in West Yellowstone. During the three year snowmobiling peak in the early 2000s, the 1st quarter of bed tax collections (January through March) contributed 18% to 19% of the annual bed tax collections. By 2009 and every year after, the first quarter's share had decreased to less than 6%. The decreased contribution of the first quarter supports what is shown in the resort tax figures; the winter economy of West Yellowstone in 1980s and 1990s was a significant contributor to annual tax collections, but has since declined significantly. The implication of the decreased winter contribution is the amplified seasonality of West Yellowstone's economy. As shown in the figure, the summer months have always been the main driver of tourism, but since the snowmobiling restrictions, the second quarter (April-June), has contributed an increasing amount to the annual collections. This indicates that tourism through West Yellowstone primarily occurs in the months between April and September

and the winter economy in West Yellowstone has become less significant as a contributor to the annual tourism economy.

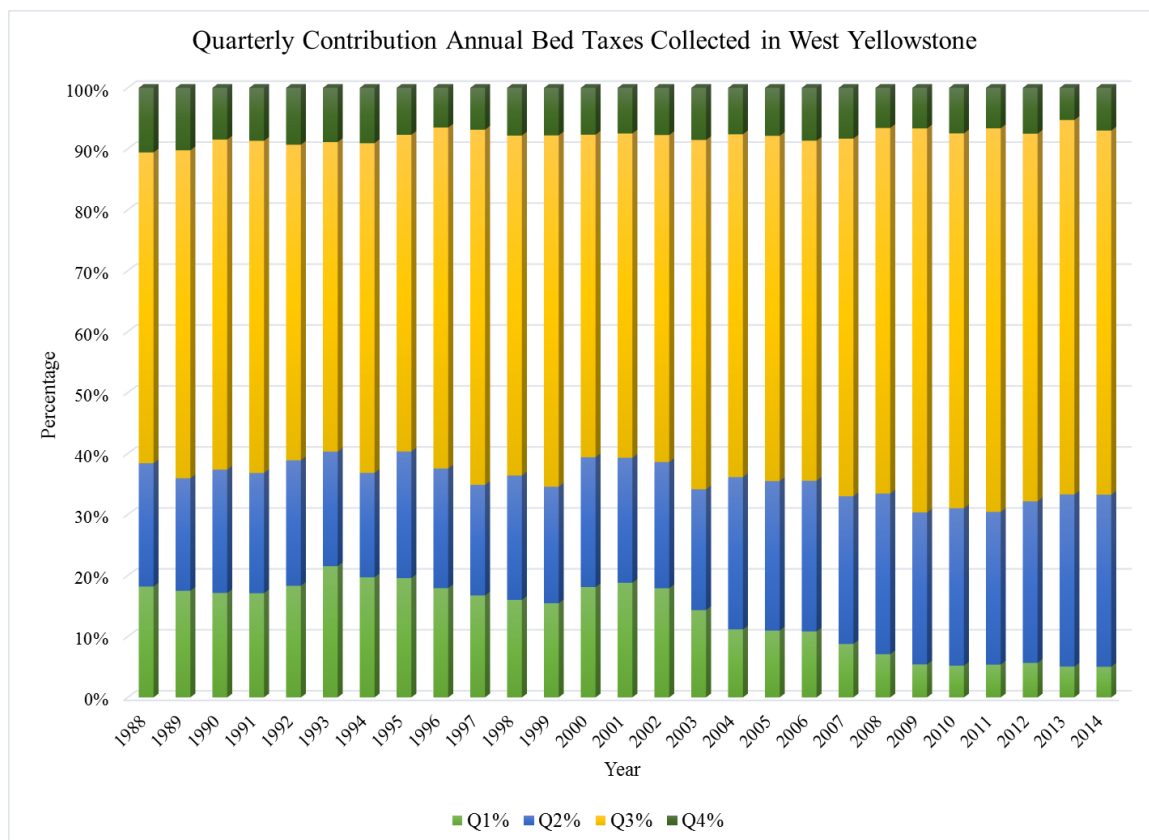


Figure 10 is a graph showing the proportional contribution of each quarter to the annual total of bed taxes collected in West Yellowstone.

The projections presented in the 2004 Temporary Winter Use Plan correctly anticipated the immediate impact to both YNP visitation and certain sectors of the winter tourism industry. However, the impact scenarios are applied to the entire GYA region thus prohibiting a direct comparison of forecasted impacts versus observed reality. The visitation projections informed by the 2002-2003 Winter Use Survey (Mansfield et al., 2003) resulted in relatively accurate and useful predictions for the winters of 2005, 2006 and 2007. The negative economic impact to the winter economy of West Yellowstone

was understated. Though the visitation impact was near what was projected, resort taxes collected in West Yellowstone were significantly lower than what was anticipated in the 2004 Temporary Winter Use Plan. A couple of possible explanations are discussed.

First, spending patterns by tourists to West Yellowstone changed. This was an issue frequently discussed by local residents because snowmobilers spend significantly more than other types of winter recreationalists. Therefore one snowmobiling tourist cannot be equally replaced by one cross-country skier; their spending profiles are vastly different. A second possibility is that the EIS incorrectly assumed that a significant number of visitors would still travel to West Yellowstone, but not enter the park. The EIS assumed many snowmobile owners and renters would still be interested in traveling to West Yellowstone to utilize the snowmobile trails throughout the surrounding national forests, but in reality, snowmobiling counts in Gallatin National Forest actually decreased after the winter use debate began. This signals that snowmobiling in the national forests was a complement to snowmobiling in YNP rather than a substitute. Therefore the increased regulation of winter use in YNP dissuaded a number of potential tourists from traveling to the GYA and decreased the utilization of snowmobile trails in Gallatin National Forest.

Conclusion

Needless to say, predicting the future is impossible, but governmental agencies are bound under NEPA to make an attempt anytime they are considering significant policy modifications. The potential impacts of their decisions and management changes must be considered. The experience of West Yellowstone throughout the debate

concerning winter use in YNP offers a case study of what the NPS does well and does not do well throughout the process of environmental assessments and impact statements. The NPS worked hard to collect on-the-ground data and conduct visitor surveys to inform their decisions. Additionally, numerous scientific studies on various aspects of Yellowstone's ecosystem were produced by public institutions and the NPS. However, politics, all the way up to the oval office, also factored into the debate and added to the management uncertainty as it influenced policy outcomes. In general, the EIS documents published by the NPS accurately projected visitation impacts from their own management changes. However, the socioeconomic projections were a bit short-sighted and lacked some important context.

Understandably, within the NEPA documents, the NPS was focused on socioeconomic impacts during the winter months, however, this narrowed vision led them to miss the greater context. The NPS failed to consider how an impact to West Yellowstone's winter economy could tilt the entire tourism landscape of the gateway community. The snowmobiling restrictions impinged the winter economy and forced West Yellowstone's businesses to reorient and focus unequivocally on their summer tourism services. The EIS documents also incorrectly assumed quick substitutions would fill the tourism vacuum and lessen the economic impact. It proved faulty to assume quick acceptance and adaptation to the new winter use management plan for YNP. As the survey results indicated, substitutions were not easy to accomplish for tourists or business owners. The idea that snowmobilers would switch from groomed trails in YNP to the national forests around West Yellowstone proved false. Finally, the impact projections

were myopic. The NPS utilized a multiplier of average spending per visitor that was derived from the high-spending snowmobiling tourists. But snowcoach passengers and cross-country skiers who entered the park had a smaller spending multiplier than the snowmobiling enthusiasts. Therefore, after the restriction of snowmobiling in YNP, a new, lower value should have been utilized to more accurately capture the spending profiles of the tourists who came after the snowmobiling restrictions were implemented. These lessons from West Yellowstone and winter use in YNP can be generalized and used to inform other tourism gateway communities struggling to cope with evolving tourist preferences and work with governmental land management agencies.

APPENDIX D

INTERVIEW GUIDE

Montana State University – Institutional Review Board

On June 18th, 2015, research proposal was approved #CH061815-EX

Interview Question Guide:

- What is your current occupation(s)?
- How long have you lived in or near West Yellowstone? Seasonal or year-round resident?
- What effects do you believe the YNP Winter Use Management plans had on the community of West Yellowstone?
- Has there been an impact on the local economy of West Yellowstone from the Winter Use restrictions?
- From your perspective, how has winter visitation to Yellowstone National Park been affected by the Winter Use Management plans? Have the restrictions changed the recreational types of visitors?
- How have local West Yellowstone businesses adapted to the changes and regulations brought about by the Yellowstone Winter Use Management plans? How about the local government?
- What do you believe are the primary economic drivers of the West Yellowstone economy? And how do you think those local economic drivers change from the winter to summer months?
- Do you believe the winter community of West Yellowstone to be a resilient one? One that is on a positive trajectory of strong personal well-being?
- That concludes all the questions I have, is there anything you would like to add?