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THE EFFECT OF NATURAL DISASTERS ON TOURISM
A STUDY OF MOUNT SAINT HELENS AND
YELLOWSTONE NATIONAL PARK

by
Maureen A. Beattie

A Project submitted to the
Faculty of the School of Food, Hotel and Tourism Management
at
Rochester Institute of Technology
in partial fulfillment of the requirements
for the degree
of Master of Science

April, 1992

**ROCHESTER INSTITUTE OF TECHNOLOGY
School of Food, Hotel and Travel Management
Department of Graduate Studies**

**M.S. Hospitality-Tourism Management
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ABSTRACT

This study examines the relationship between natural disasters and natural-resource based tourism. Natural disasters are a basic part of the workings of nature and therefore, will always be with us. The tourism industry contributes enormously to the U.S. economy. Regardless of their reasons for traveling, tourists spend money. Natural disasters and tourism are two elements that play significant roles in the world today and will continue to in the future. This study addresses the question of what happens when these two elements intersect.

It was assumed that natural disasters and tourism are on opposite sides of the spectrum and therefore, are mutually exclusive rather than complementary. This study is interested in determining if it's possible for these two elements to share a complementary relationship. Attention is focused on two relatively recent natural disasters that have occurred in the United States -- the 1980 eruption of Mount Saint Helens and the 1988 wildfires of Yellowstone National Park. Natural-resource based destinations are examined because it was assumed that the possibility of a positive relationship existing would be greater in rural, low-density population centers.

The main issue addressed is whether the natural disasters of Mount Saint Helens and Yellowstone National Park influenced the decisions of vacationers to visit these destinations. Secondary issues are; what can be learned from the tourism officials, directors, planners, and, businesses in Mount Saint Helens and Yellowstone in their efforts to deal with the aftermath of each disaster, and secondly, what role did the media play in their coverage of a natural disaster.

To address these issues, three approaches were undertaken -- extensive library research, interviews of knowledgeable experts and representatives of each area, and review of extensive secondary data.

The results indicated that there were immediate, short-term negative effects on visitation and visitor expenditures. However, within remarkably short periods of time, tourism rebounded in each destination and continues to grow. This study concludes that the natural disasters of Mount Saint Helens and Yellowstone National Park did in fact share a long-term, positive relationship with tourism.

Important lessons to learn from the experiences of the tourism officials, planners, directors, and businesses in Mount Saint Helens and Yellowstone are discussed and recommendations are also suggested.

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CHAPTER I

INTRODUCTION

News of another natural disaster that has struck is a frequent occurrence in the United States. It may have been an earthquake that shook a city; a hurricane that rocked the coast; a wildfire that raged through acres of forest; or a volcano that spewed hot ash down a mountainside. Each is a devastating force with enormous destructive power and there is little mankind can do to prevent their occurrences.

NATURAL DISASTERS

With all of the human technology that exists today, scientists are only able to monitor conditions in an attempt to predict the occurrence of a natural force and its intensity. However, this is not too surprising when you look at the history of natural forces. The violent forces of nature have been part of this world long before the arrival of mankind. These forces helped shape the history of our world and are nature's way of retaining balance and stability. Kendrick Frazier (1979) stated in his book, The Violent Face of Nature - Severe Phenomena and Natural Disasters, that the powerful forces of nature are not something apart from the natural order of things. They are the natural consequences of a quest for balance, an outgrowth of the need for equilibrium.

With the arrival of mankind, natural forces became natural "disasters" because they began to disrupt the lives of people. Natural forces that take place in uninhabited areas are not disasters. They are in fact just nature's way of maintaining stability. It takes both the presence of humans and a natural force to make a disaster. A hurricane that remains at sea far from a populated coast is only a storm, not a disaster. However, when a natural force strikes an area populated by people and developed with real estate and businesses it becomes a disaster because there is the potential for great loss in terms of lives and property.

Natural forces occur just about everywhere, from rural towns to metropolitan cities. It is difficult for mankind to escape contact with natural forces because the human population continues to grow. Therefore, there are increasing numbers of people who are forced to inhabit areas susceptible to disasters. Just a few examples of recent natural disasters that have occurred in the U.S. follows.

On September 21, 1989, Hurricane Hugo smashed ashore at Charleston, South Carolina. More than 20 deaths were reported and approximately 40,000 homes were destroyed or severely damaged in South and North Carolina. Estimated losses exceeded \$4.5 billion dollars ("Hurricane Hugo," 1989). On October 17, 1989, an earthquake registering 7.1 on the Richter scale struck the cities of Oakland and San Francisco in Northern California. 3,757 people were injured and 63 killed. Public-sector, business, and personal losses due to the earthquake were estimated at \$7.8 billion dollars (Griggs, 1990). In October of 1991, fires hit the Oakland Hills area of California consuming some of the city's most expensive real estate -- million dollar homes with bay views. In less than 24 hours, flames destroyed more than 3,000 homes and 24 people were dead and 25 missing. Property damage was estimated at \$5 billion dollars (Arias & Chiu, 1991). In rural areas, disasters such as the 1980 eruption of Mount Saint Helens and the 1988 wildfires of Yellowstone National Park have occurred. At Mount Saint Helens, 57 people lost their lives and property damage was close to \$3 billion dollars (Steinhart, 1990). In Yellowstone, no human deaths were reported but several species of animals suffered losses and more than 900,000 acres of the Park were burned (Simpson, 1989).

Natural forces do not discriminate in terms of where they strike and how much destruction they cause. Each one is powerful in its own right. Since natural forces are a basic part of the workings of nature, they will always be with us. Therefore, we should respect and attempt to understand them. It is the intent of this study to provide a better understanding of these forces by focusing attention on one specific area -- the

relationship they share with tourism.

TOURISM

Shorter working hours, greater individual prosperity, faster and less expensive travel, and the impact of advanced technology has all helped to make the leisure and tourism industry the fastest growing industry in the world (Edgell, Sr., 1990).

The tourism industry contributes enormously to the U.S. economy. Regardless of their reasons for traveling, tourists spend money. The U.S. Travel Data Center calculated that U.S. and foreign travelers spent \$328 billion in the U.S. during 1990. Of this \$328 billion, foreign visitor spending in the U.S. was \$41 billion. U.S. travelers spent \$288 billion within the United States on trips involving an overnight stay away from home and day trips to locations of 100 miles or more (The 1990-91 Economic, 1991). The money spent by tourists creates a ripple effect that reaches every part of the community. Local income from tourist expenditures is largely re-spent in the area on various goods and services, leading to still more local income that then can be used for more local expenditures and so on.

The benefits of tourism can be divided into two categories, economic and non-economic. The economic benefits consist of employment benefits, diversification of economic base, and tax revenues. Non-economic benefits of tourism include community pride, environmental improvement, and cultural benefits.

ECONOMIC BENEFITS

Employment Benefits:

Travel spending in America directly generated 5.9 million jobs in 1990, paying nearly \$84 billion in wages and salaries (The 1990-91 Economic, 1991). The tourism industry stands out among major U.S. industries in creating new jobs, resisting

economic downturns, and providing a major source of jobs for minorities, women, and youth. In terms of employment, travel/tourism directly generates more jobs than any other U.S. industry except the health services industry that includes doctors, nurses, hospitals and laboratories.

Diversified Economic Base:

The more industries a community can develop, the more insulated it will be from the problems encountered in times of national and local economic fluctuations. Communities that depend on one or only a few large industries will experience high unemployment and other social consequences if economic turmoil directly affects those industries. Tourism as a diversification industry has many advantages: cities, as well as outdoor recreation areas are normal and natural destinations; tourism is growing and will continue to do so; and tourism produces less pollution and therefore, is attractive to businesses and residents alike (Tourism USA, 1986).

Tax Revenues:

As the tourist industry expands, so do tax revenues. Travel spending in America produces over \$43 billion in federal, state and local tax revenues (The 1990-91 Economic, 1991). Special taxes are often levied by communities, aimed specifically at tourists. Such special taxes include lodging taxes and entrance fees and are based on the rationale that tourism imposes certain public costs, such as increased police protection, additional public facilities, and the upkeep of these facilities. Special taxes provide the marginal profit and revenue balance needed to maintain these services. In reality, tourists subsidize local taxpayers. The amount of tax money collected from tourists directly reduces the amount of money local taxpayers have to pay.

NON-ECONOMIC BENEFITS

Community Pride:

The tourist industry also has less tangible benefits, such as community pride. If a community discovers that it has something to offer visitors, a sense of community pride can develop. Residents of a community who take pride in their heritage or history can make the community even more attractive, enriching it culturally and economically. Visitors, when meeting a proud resident, are likely to be shown more hospitality and have a better time. They are also likely to stay longer and spend more money. These visitors are also an effective means of "word-of-mouth" advertising, making a community more visible to other potential travelers.

Environmental Benefits:

Little pollution is created by tourism relative to that of other industries, such as heavy manufacturing. The development of tourism infrastructure and facilities has generally caused less physical environmental damage than have timber and mineral extractions or industrial plants. Tourism has also made it possible for communities to develop strategies for the conservation of natural attractions and cultural heritage. Tourism can provide an incentive for the protection of national parks, the restoration of historical monuments, the renovation of neighborhoods, and the preservation of cultural events. In many places in the world, the expenditures made by tourists provide the economic means to protect the destination's environment.

Cultural Benefits:

A well-organized tourist business can benefit residents as well as visitors through exposure to a variety of ideas, people, cultures, and languages. Tourism can serve local craftsmen by providing an audience and market for their art. Tourism offers visitors the opportunity to enjoy and learn about local traditions and events, such

as local festivals and fairs. It can add to the richness of the resident's experience by stimulating an interest in the area's history through restoration and preservation of historical sights. Tourism offers vast opportunities for people to know and understand one another in a direct way by establishing contacts between people of different backgrounds.

Community Tourism:

Every community is affected by tourism, whether it is located in rural areas or in a metropolitan city. Most local communities in the world have some resource, attraction, activity, event, or special interest that will appeal to a traveler. Even if a community is not a destination in itself, it still may have tourism potential. A community may be located along access routes to other destinations and therefore, sell gasoline, food, lodging, souvenirs, and other services to enroute visitors. Such is the case of many rural communities in the United States.

Rural communities in the U.S. suffer from many problems. Many have experienced population loss, especially among better educated youth and skilled workers. Residents of rural communities lag behind in education. Across the country, the economic competitiveness of rural areas is declining, in part because these communities depend upon too few sources of income (Edgell, Sr., 1990).

Rural communities are recognizing the need to seek economic development alternatives to the once dominant industries of mining, ranching, forest products, and farming. Many look to their own attractiveness as a basis for tourism development. Often, rural communities are surrounded by scenic outdoor recreation areas such as parks and forests. These communities can take advantage of the tourism activity generated by the parks and forests by becoming service centers, providing services such as food, lodging and guide services. In fact, some communities that are adjacent to a major attraction become dependent on the spending generated by tourists for their very

survival.

LINK BETWEEN NATURAL DISASTERS AND TOURISM

Natural forces will always be with us and tourism is a major sector of the world economy. Therefore, these two elements will continue to play significant roles into the future. In the past these two elements have intersected and it is likely that they will again in the future.

Separately, natural disasters and tourism conjure up entirely different images. When thinking of tourism, images that come to mind are vacationers, fun, relaxation, sightseeing, and beautiful surroundings. Natural disasters, on the other hand, bring to mind images of destruction, death, and tragedy. For many people, areas affected by natural disasters do not conjure up images of ideal vacation destinations. It appears that these two elements are on opposite ends of the spectrum and therefore, are mutually exclusive rather than complementary. Often it seems that tourism and the benefits derived from it become "victims" of natural disasters.

Purpose of This Study:

The purpose of this study was to examine the relationship that exists between natural disasters and natural resource based tourism and to explore the question of whether it's possible for the two, in certain circumstances, to share a complementary relationship.

This study focused attention on two relatively recent natural disasters that have occurred in the U.S. -- the 1980 eruption of Mount Saint Helens and the 1988 wildfires of Yellowstone National Park. There were others that could have been chosen, such as the ones mentioned in the opening paragraphs of this paper. However, this study focused attention on natural disasters that occurred in rural, natural resource areas as

opposed to high-density population centers.

The eruption of Mount Saint Helens and the fires in Yellowstone National Park were chosen because they are disasters that occurred in natural settings and in areas not largely populated. It was assumed that the possibility of a positive relationship existing between tourism and natural disasters would be greater in less populated areas. Rural areas usually do not have a heavy concentration of people, industries, or real estate and therefore, monetary damages tend to be less than in high-density population centers. Another reason that Yellowstone National Park was chosen was because several small gateway communities are adjacent to the Park and are dependent on the tourism activity generated by Yellowstone for their economic well-being. Because tourism is such an important industry in rural communities, it is important to look at the effect that natural disasters have on these communities.

The main focus of this paper was on the 1988 wildfires of Yellowstone National Park because of the vast quantity of information that was available. The Mount Saint Helens eruption was also included because there were significant differences between the backgrounds of Yellowstone National Park and the Mount Saint Helens area, prior to the natural disasters that occurred, to provide an interesting comparison. While both represented natural resource based tourism, there were significant differences in their visitor levels and their recognition levels as a major tourism destination.

Contrast Between Mount Saint Helens Before 1980 and Yellowstone Before 1988:

Mount Saint Helens and its surroundings are managed by Washington's Gifford Pinchot National Forest and Yellowstone is managed by the National Park Service. Since their inception, National Forests and National Parks have been managed differently. National Forests were established on conservation principles -- the wise use of natural resources. Through legislation Congress has mandated that Forests be managed for multiple use; allowing for recreation, wildlife, grazing, mining, oil and

gas, timber, and wilderness. While all these uses do not occur on the same area, it is the mission of the Forest Service to provide that combination of uses that best serves the public interest.

In National Forests, timber harvest, livestock grazing, mining, mineral leasing and production, and wildlife habitat improvements are routine activities that are in keeping with congressional mandate.

National Parks were founded on the principle of preservation, public enjoyment, and non-interference with natural processes. Therefore, logging, oil and gas production, mining, hunting, livestock grazing, wildlife habitat modification, fire control, and other development activities are severely restricted or prohibited in National Parks ("The Greater Yellowstone Area," 1987).

The communities surrounded by Mount Saint Helens and Yellowstone were heavily dependent on the benefits and resources provided by the federally managed lands of the Gifford Pinchot National Forest and Yellowstone National Park. However, because of the differences in management principles between the two, the economies of each area differed. Prior to the events of 1980, the surrounding communities of Mount Saint Helens relied not only on recreation and tourism use of the Forest as a source of income but also relied on timber supply, mining, and ranching. The Gifford Pinchot National Forest provided a variety of products and services to support local economies. In contrast, local communities surrounded by Yellowstone National Park relied heavily on tourism as their major source of income. While the Greater Yellowstone Area consisted of two National Parks and several National Forests, Yellowstone National Park was by far one of the most, if not the most, important contributor to the economic well-being of area communities. Yellowstone National Park is the best known national park in the world and generates significant tourism activity and spending. Therefore, tourism was extremely important to the economic welfare of the local communities surrounded by Yellowstone National Park.

Besides the diversified economies, the Mount Saint Helens area and Yellowstone National Park also differed in terms of visitor levels and recognition prior to the disasters that occurred in each area.

The Mount Saint Helens area was a favorite vacation spot for local residents. Generations of families from Oregon and Washington returned yearly to the area. On a worldwide scale, however, Mount Saint Helens was not well known. There was only limited infrastructure development. Most of the property in the area was privately owned, such as lake front cottages and YMCA summer camps. Only a few resorts existed in the area. The Mount Saint Helens area was a well-kept secret from most of the world.

Yellowstone National Park, on the other hand, was a favorite vacation spot for travelers from all around the world. Millions of people were attracted to the Park each year. There was an enormous infrastructure in place. The Park operated as its own entity, providing food, lodging, gasoline and any other service imaginable. Roadways took visitors along access routes where gateway communities also attracted and assisted travelers with their needs. People of all ages enjoyed the amenities the Park offered. Yellowstone was the hub of tourism for the state of Wyoming.

The two areas differed substantially in the size of their tourism industry. The Mount Saint Helens area had a greater local appeal than it did an international appeal. Yellowstone, on the other hand, was recognized locally as well as internationally as a favorite vacation destination. Mount Saint Helens' tourism industry development was limited, while Yellowstone's was quite extensive. This study examined how each area was affected by the natural disasters that occurred there and determined if tourism, while different in each case, was impacted in similar ways.

Important Issues:

The main issue addressed in this paper was whether the disasters of Mount Saint Helens and Yellowstone National Park influenced the decisions of vacationers to visit these destinations. Did people stay away from these areas because of what took place there? If this was the case, were declines in visitation levels short-term or long-term?

To address this issue, the key source of information was visitation statistics and tables. For this study, it was assumed that if visitation levels declined in either the Mount Saint Helens area or Yellowstone National Park, then the natural disasters that occurred there shared a negative relationship with tourism. On the other hand, if visitation levels increased then it was assumed that the 1980 eruption of Mount Saint Helens and/or the 1988 wildfires of Yellowstone shared a positive or complementary relationship with tourism.

As an indirect measure of determining the relationship between tourism and the Yellowstone fires, changes in gross lodging tax revenue figures for the gateway communities of Yellowstone were examined. As noted earlier, it is important to look at how the fires affected visitation and sales in these communities. Since lodging taxes are one of the most likely taxes visitors to the states of Wyoming and Montana will encounter, studying whether gross lodging tax revenues increased or declined provided an indication of whether a positive or negative relationship existed between the fires and tourism.

Non-resident sales figures inside and outside Yellowstone, as well as non-resident travel figures for the state of Montana were examined as additional factors in studying whether travelers stayed away from the Yellowstone area due to the fires of 1988.

There were other means that could have been examined in determining what type of relationship existed between tourism and the natural disasters that occurred in Mount Saint Helens and Yellowstone National Park. Employment levels, spending

levels, or occupancy rates of gateway hotels, motels, and lodges could have been examined.

However, this study chose to examine visitation levels in attempting to determine whether a positive or negative relationship existed between natural disasters and tourism. The most important component of tourism is the tourist. If there are fewer tourists, spending usually declines. If there is less spending then the other economic benefits of tourism are diminished.

There were two additional issues that this paper addressed. First, what, if anything, could be learned from the tourism directors, planners, and businesses in Yellowstone and Mount Saint Helens who have had to deal with the aftermath of a natural disaster; and second, what role did the media play in their coverage of a natural disaster, did they help or hinder the recovery process?

The question of the media's role is important to examine because an event such as a natural disaster attracts wide media attention and research has shown that disaster stories have high audience appeal. A survey by the American Newspaper Publishers Association found that accident and disaster news was read by 39% of the readers, versus 25% for political news and 33% for general, non-local, human interest news (Sood, Stockdale, & Rogers, 1987). Therefore, the role the media plays in informing the public of the events surrounding a natural disaster is of importance to those closely associated with tourism.

Importance of This Study:

This research will prove helpful to tourism directors and planners and also to businesses dependent on tourism. It is realistic to assume that at some point in time, many tourism directors, planners, and businesses will encounter natural disasters and will be forced to deal with the aftermath. This realization is not due to the fact that the occurrences of natural disasters are increasing but because of the fact that the human

population is growing and people are being forced to inhabit danger zones that are susceptible to natural events. Therefore, it is important for those involved in the tourism industry to better understand what type of relationship exists between a natural disaster and tourism. It is vital to determine what happens to tourism after the occurrence of a natural disaster -- are there increases or declines in visitation, what benefits and/or detriments are realized, and is it true that tourism businesses in these areas with suffer long-term losses.

Although the scope of this research is intentionally narrow, it is hoped that the results will provide interesting and helpful insights for those in the tourism industry who face the possibility of encountering and dealing with the forces of nature. Yellowstone National Park represents one of America's most popular vacation destinations and therefore, much can be learned from the experiences of the tourism industry there.

The following chapter (Chapter two) details the events of the 1980 eruption of Mount Saint Helens and the 1988 wildfires of Yellowstone National Park. Chapter three addresses the study procedures used in researching the relationship tourism shared with the natural disasters that occurred at Mount Saint Helens and Yellowstone National Park. In chapter four, public reaction and official response to each disaster is examined. Chapter five addresses the effects and impacts of the eruption of Mount Saint Helens and the wildfires of Yellowstone National Park on tourism. Chapter six contains a discussion of these impacts, as well as any implications, and suggests recommendations for those interested in further research of this topic.

CHAPTER II

HISTORICAL BACKGROUND

MOUNT SAINT HELENS

History & Background:

Mount Saint Helens is a volcano located in southwest Washington State, about 48 miles northeast of Vancouver, Washington. Located at its northern base is Spirit Lake, which before the eruption was a primary recreation spot. Surrounding Mount Saint Helens is the Gifford Pinchot National Forest that includes 1,371,720 acres of mountains, meadows, caves, streams, and canyons that attract hikers and outdoor enthusiasts. Gifford Pinchot National Forest is named in honor of the first chief of the Forest Service, and in 1913, the Forest Service built the first ranger station at Spirit Lake. The ranger stations in the Mount Saint Helens area provide information and assistance to visitors to the forest.

Mount Saint Helens' natural beauty has beckoned visitors for many years. As early as 1853, the first of many climbers had scrambled to the summit. Visitors to the Mount Saint Helens area enjoyed boating, swimming, or fishing at Spirit Lake or camping in one of the several campgrounds. Generations of children from Portland, Oregon and Longview, Washington went to camp at Spirit Lake and generations of adults vacationed there. Prior to the introduction of snow-plowing in the 1960's, winter was the only time that the lake was inaccessible. After snowplowing began to clear roads and make access possible, winter use grew tremendously. Cross country skiing, snowmobiling, and snowshoeing became very popular.

It should be noted again that before the volcanic eruption in 1980, the majority of developments in the Mount Saint Helens area were privately owned. A large percentage of lodges and resorts were privately managed. Also, many of the camps were operated privately, such as the YMCA that ran summer camps at Spirit Lake.

Mount Saint Helens was a serene mountain of spectacular beauty until 1980 when it became a violent, ash-spewing volcano.

Chronology of Events Resulting in the 1980 Eruption:

It began on March 20, 1980, when an earthquake rumbled under Mount Saint Helens, registering a magnitude of 4.1. On March 27, the mountain gave off a loud boom and a column of ash and steam rose 7000 feet above the summit. This was the first visible eruption since 1857. On March 30, there were over 90 separate eruptions. By April 5, the northern slope had started to bulge and 18 eruptions were recorded. Then the day of fury arrived on the morning of May 18, 1980. At 8:32 a.m., a 5.1 magnitude earthquake shook the north flank of the mountain. Within seconds, the north flank broke loose and began sliding downhill as a massive avalanche. Ash shot 13 miles into the sky. The flow of fire and ash, as hot as 1400 degrees, raced down the slope traveling over 100 miles per hour. As it continued downhill, it was channeled in several different directions due to the topography of the area.

One portion of the avalanche slammed into Spirit Lake, causing the water level to rise 200 feet as debris came to rest at the bottom of the lake. The largest portion of the avalanche was deflected westward into North Toutle River. The deposits of steaming rocks, debris, and blocks of ice that were carried downstream, ripped out numerous homes and bridges. In the end, Mount Saint Helens lost its top 1300 feet. (Steinhart, 1990)

The activity of Mount Saint Helens declined during the days immediately following the May 18 eruption. Then on May 25, a second major eruption occurred, consisting of steam and ash. This, however, was not as large as the eruption on May 18. Mount Saint Helens erupted again on June 12 sending an ash column up 50,000 feet. This eruption lasted for six hours and was Mount Saint Helens' fourth major explosion. Activity on the mountain continued into 1982.

Aftermath of the Eruption of Mount Saint Helens:

Within six miles north of the volcano, once covered in dense forest, no trees remained. The forests of old-growth hemlock, Pacific silver fir, and Douglas fir were turned into a mass of splintered wood. Once clear, free-flowing streams, supporting numerous species of aquatic life, were broken into many small trickles of water fighting to make their way downstream through the rubble left by numerous mud flows. It appeared as though nothing living above ground could have survived. Some reports depicted the area as a virtual moonscape barren of any living thing. Winds carried heavy concentrations of ash in a northeasterly direction covering eastern Washington, Idaho, and Montana.

In the days, weeks, and months that followed, it was estimated that 96 thousand acres of forest were incinerated or blown over; 57 people lost their lives; and the amount of property damaged was close to \$3 billion (Steinhart, 1990). Also, 5000 deer, 1500 elk, 200 black bears, over a million birds, and 11 million salmon and steelhead were killed (Barnes & Haupt, 1985). Many scientists, shortly after the eruption, declared the Mount Saint Helens area a "dead zone" that would not revive for decades.

However, as time went on, scientists began to realize they were wrong. Nature was beginning to heal itself. A look back in history shows that the Mount Saint Helens area is a land that has experienced eruptions before and has recovered. Scientists began to realize that ecosystems have a remarkable ability to respond to disturbances. Nature's ability to rejuvenate is astounding. When a major disturbance occurs in an area, no matter how destructive it may be to animals and plants, they start to immediately reclaim their territory. This reclamation starts with the simplest or most adaptable life forms and progresses through years towards more sophisticated forms of life (Corcoran, 1985).

It was discovered that not all areas in the blast zone were affected in the same ways. The destruction zones of Mount Saint Helens fell into four categories. The Inner Zone of destruction included 70,000 acres totally covered by the avalanche. Here all vegetation and animals were killed. The Blowdown Zone was heavily damaged by the blast cloud and the shower of hot rocks as they splintered trees in a 50,000-acre area. In the Singed Zone, 23,000 acres of trees were burned. Ash covered the ground, smothering most of the vegetation. Many animals were killed in this outer zone. The fourth category was Mud flows and Floods that surged in all directions from the mountain. Heavy deposits of rock and ash clogged and choked the streams (Corcoran, 1985). Since the range of destruction varied, the recovery of the vegetation and animals on Mount Saint Helens has also varied during the past ten years.

Within weeks of the explosion, botanists found that the roots of such hardy plants as lupines, cattails, and fireweed had survived within 10 kilometers of the volcano and were growing through layers of ash, one foot deep. Since that time, over 100 species of plant have been recorded in the volcanic soil. Along with finding plant life surviving and growing, researchers were surprised to discover elk grazing on the emerging plants, centuries before their forest habitat is expected to recover. Also returning to the area are salmon and steelhead trout, black bears, bobcats, and beavers.

In 1985, a mere five years after the massive explosion, scientists at a symposium on the recovery of the area concluded unanimously that Mount Saint Helens was teeming with life again (Tennesen, 1986).

In the subsequent chapters, the question of what became of tourism in the Mount Saint Helens area after the eruption of 1980 is explored. However, before then, a historical review of Yellowstone National Park and the wildfires that occurred there in the summer of 1988 follows.

YELLOWSTONE NATIONAL PARK

History & Background:

Yellowstone National Park may well be one of the most cherished places in America. For many people, the mere mention of its name conjures up images of the ideal vacation spot. The Park consists of 2.2 million acres of hot springs, forests, and meadows and is home to elk, bison, moose, pronghorn antelope, bighorn sheep, and grizzly bear. It is located in the northwest corner of Wyoming with small portions of the park lying in Montana to the North and Idaho to the Southwest.

On March 1, 1872, Yellowstone became the first U.S. national park when Ulysses S. Grant signed the Yellowstone Park Act. Yellowstone was to be preserved as a "public park and pleasuring ground for the benefit and enjoyment of the people" (Utley, 1982). Yellowstone is an entire region of rivers, forests, and mountain ranges. The region is called the Greater Yellowstone Area and includes six national forests and two national parks and encompasses several small towns and villages. Grand Teton National Park is located to the South of Yellowstone and covers 310,000 acres.

As the land came under human management, Yellowstone's natural appearance began to change. In 1886, the U.S. Army was given the task of patrolling the park and protecting its resources from exploitation. There had been problems with vandals and poachers. The Army was also responsible for fighting forest fires. However, in 1916, the National Park Service was created and the Army's role of national park protector came to an end.

The task of the National Park Service was "to conserve the scenery, the natural and historic objects, and the wildlife therein and to provide for the enjoyment of the same in such a manner and by such means as will leave them unimpaired for the enjoyment of future generations" (Utley, 1982). The National Park Service (NPS) had two main goals -- to provide for preservation of the parks and for their public use.

Policies and programs were developed to protect wildlife, landscape, and forests while at the same time creating roads and facilities that would allow the public the opportunity to see and appreciate the park. In keeping with their goals, fire management became one of the Park Service's concerns. The NPS Director at the time, Stephen Mather, followed a strict policy of fire control. He felt that vacationers did not come to Yellowstone to see burnt woodlands, or to have their lives endangered, or their views obscured by smoke (Storer & Ling, 1990).

Starting in 1945, Smokey the Bear played a significant part in the National Park Service's fire prevention campaign. By 1973, the number of forest fires declined by more than half. The NPS valued Smokey at over \$17,000,000 alone in terms of timber saved. His educational value was incalculable. He had taught a generation of Americans to regard forest fires as terribly destructive.

However, beginning in 1972, Smokey was no longer campaigning in Yellowstone. In that year, the NPS enacted a "natural burn" policy that permitted natural fires falling within the terms of specific conditions to burn naturally without intervention. This new policy came about from the urging of ecologists and forest management experts who pointed out that fires were a necessary part of normal forest development. Ecologists also pointed out that when fires are prevented, many forests actually lose their natural character. Land protected from fire begins to support non-native species of trees, shrubs, and wildlife. These non-native species then compete for survival with native species, forcing a struggle of the fittest.

In the late 1960's and early 1970's, the NPS fire management policy allowed the administrator of each national park to develop their own fire management plan that best met their unique conditions. Yellowstone administrators, in 1972, developed their four-part plan. First, the plan permitted lightning-caused fires to burn naturally, as often as possible. Second, all wildfires that threatened people, historic and cultural sites or special natural features; menaced threatened or endangered wildlife; or moved

to burn outside Park boundaries would be suppressed. Third, the plan called for full fire suppression on all human-caused fires. Fourth and finally, "prescribed" burning was permitted in areas where there was excessive buildup of fuels, such as dead and fallen trees, in order to eliminate dangerous levels of these fuels (Vogt, 1990).

The policy seemed to work well from 1972 through 1987. During that time only a total of 34,175 acres burned in the Park due to natural fires. The largest fire consumed about 7,400 acres. However, 1988 proved to be different.

Chronology of Events Resulting in the 1988 Yellowstone Fires:

The Greater Yellowstone Area experienced an exceptionally wet spring in 1988. April rainfall was 151 percent above normal and May rainfall, 181 percent above normal. However, in June, July, and August, a severe drought set in and rarely did any rain fall within those three months. In the 112 year history of the Park, no summer had ever been as dry. Lightning easily starts fires when fuel moisture contents are between 8 and 12 percent. That summer, the moisture content of small branches and grasses dropped to as low as 2 to 3 percent (Vogt, 1990).

On June 23, 1988, lightning struck in the woods near Shoshone Lake, in the southwest corner of the Park, igniting a fire. Park Superintendent, Robert Barbee, didn't think the fire was significant and allowed it to burn. Even with the low moisture content, the situation was not deemed critical. That was, until the winds came. Abnormally strong winds blew from the Southwest and caused the fires to spread at an incredible pace.

Two days after the Shoshone fire started, the Fan fire started in the Park's northwest corner. In the next couple of weeks, fires called the Red, which joined with the Shoshone; the Lava, to the South of the Park's administrative headquarters, at Mammoth, in the northwest corner of the Park; and the Mist and the Clover, which eventually joined together in the northeastern corner, were burning. All were lightning

fires and all were allowed to burn. Then on July 21, park officials suspended its natural-burn policy because of the extreme burning conditions that existed. All new fires were aggressively fought and firefighters worked to contain those fires already raging. During this time, there were also several human-caused fires burning in the Greater Yellowstone Area. None of these originated as prescribed, management-set fires. They were accidental fires and therefore, they were fought aggressively from the outset.

There is one day that stands out among the others, August 20, 1988. Fire consumed a record 150,000 acres that day due to drought conditions and high winds. It is known in Yellowstone history as "Black Saturday."

The fires raged well into September. The first glimmer of hope that the end was near came on September 11 with the first significant rainfall since July. Also, fall was coming and with it came cooler temperatures and needed moisture.

Aftermath of the Yellowstone Fires:

In all, 49 fires were started by lightning in Yellowstone National Park in 1988. Fourteen burned themselves out, 24 were suppressed or contained, and 11 natural starts burned together. In total, 988,925 acres burned or approximately 40 percent of Yellowstone National Park (Simpson, 1989). Not in recent history have such large, uncontrolled wildfires burned across the Greater Yellowstone Area.

The largest fire-suppression efforts in history were used to fight the fires of 1988. More than 25,000 firefighters were aggressively fighting fires during the season. The military was called in to supplement civilian crews. One hundred seventeen aircraft were used to transport fire crews and supplies and to dump water and fire retardants. One hundred fire engines were operated. The total cost came to approximately \$120 million (Billings Gazette, 1989). Even with all the advances in firefighting, there was little that could be done to contain, let alone extinguish, the kind

of fire firefighters faced in the summer of 1988. Nature had the upper hand.

The destructive eruptions of Mount Saint Helens had ended and the wildfires of Yellowstone National Park were extinguished, yet this did not signal the end of activity in each area. In fact, it was just the beginning of things to come. The future of tourism in each area was uncertain.

The following chapter outlines the specific steps and procedures taken and the sources of information used in this study to examine the issue of what became of tourism in Mount Saint Helens and Yellowstone National Park.

CHAPTER III

STUDY PROCEDURES

INTRODUCTION

As previously mentioned in the Introduction chapter, this study addressed three issues. The main issue was to determine whether the natural disasters that occurred at Mount Saint Helens and Yellowstone National Park influenced the decisions of vacationers to visit these areas. Did the events surrounding the 1980 eruption of Mount Saint Helens and the 1988 wildfires of Yellowstone National Park result in vacationers choosing to stay away from these destinations, or was it possible that a positive relationship existed between these disasters and tourism? Secondary issues addressed included what could be learned from the experiences of the tourism directors, officials, and businesses in Yellowstone and Mount Saint Helens and what role did the media play in their coverage of a natural disaster.

In order to address these issues, three approaches were undertaken. First, extensive library research was conducted in order to gather sufficient background literature and media accounts of the events of Mount Saint Helens and Yellowstone National Park. The second approach was to enhance the literature reviewed with information obtained in interviews of knowledgeable experts and representatives of Mount Saint Helens and Yellowstone. The key representatives chosen were identified in the research process as well as through the help of James Burke, Ph.D., Associate Professor of the School of Food, Hotel, and Tourism Management at the Rochester Institute of Technology and Priscilla Baker, Tourism Director with the U.S. Department of the Interior, National Park Division. The third approach was to collect and review extensive secondary data that directly addressed the issue of visitation to Mount Saint Helens and Yellowstone National Park prior to and following the disasters. The majority of the secondary data was received directly from the key

representatives interviewed. Other sources of data were identified during the literature research process.

It should be noted that the amount of information written from a tourism perspective is quite limited, and therefore, the interviews with and correspondence from Yellowstone and Mount Saint Helens representatives were invaluable to this study. The following sections of this Chapter detail more specifically the information gathered and the means of obtaining such information for this study.

MOUNT SAINT HELENS:

Media Accounts:

Research journals, public-interest magazines, books, and newspaper articles were reviewed to gather information not only on the events of the 1980 eruption of Mount Saint Helens but also to uncover public reaction to the disaster and the steps taken by the Forest Service in response to this disaster. The specific literature reviewed is located in the Reference section at the end of this paper.

Interviews:

There was only a limited amount of research and literature written with regard to the eruption of Mount Saint Helens and tourism activity in the area. Therefore, interviews with knowledgeable representatives in the Mount Saint Helens area were extremely important. During the initial research phase, two sources of information in the Mount Saint Helens area were identified; the Gifford Pinchot National Forest Rangers Office and the Public Affairs Office of the Mount Saint Helens National Volcanic Monument. The Gifford Pinchot National Forest Rangers Office was contacted because Mount Saint Helens is located in the Forest and the Rangers Office presently oversees development in the area.

The key representative at the Forest Rangers Office was Mary Wilson, a public service staff member of the Gifford Pinchot National Forest. Ralph Naers was the key representative at the Public Affairs Office of the Mount Saint Helens National Volcanic Monument. Mr. Naers is a customer relations employee of the Public Affairs Office. Both Mary Wilson and Ralph Naers provided a great deal of verbal information through numerous telephone conversations. This information detailed the changes that have occurred in the Mount Saint Helens area as a direct result of the 1980 eruption. The specific information obtained from these conversations is located in Chapters four and five.

Secondary Data -- Visitation Levels and Composition:

Only limited statistical data was available from the Gifford Pinchot National Forest Rangers Office and the Public Affairs Office of the Mount Saint Helens National Volcanic Monument. Prior to 1980, the Rangers Office felt that there was no need to collect statistical data on visitation because the majority of the area was privately developed. The Mount Saint Helens National Volcanic Monument was not in existence prior to 1980 and therefore, they were unable to provide any information on what visitation to the area was like before the eruption of Mount Saint Helens. Therefore, the information available for this study was necessarily limited to the years following the eruption.

Mary Wilson was able to provide copies of Tables that documented visitation levels to the Mount Saint Helens area since 1983. She also provided a pie chart analysis of 1990 visitor composition. Ralph Naers was also able to provide visitation tables that listed the number of yearly visitors to the Mount Saint Helens area since the eruption. Analysis of these visitation and composition tables is located in Chapter five.

As mentioned earlier, tourism industry development in the Mount Saint Helens area was limited. Because of this fact, the number of sources of information concerning tourism was also very limited for this study.

YELLOWSTONE NATIONAL PARK:

Media Accounts:

As in the case of Mount Saint Helens, research papers and journals, newspapers, general interest magazines, and books were reviewed for information concerning the events that took place inside Yellowstone National Park and in outside gateway communities during and following the wildfires of 1988. Again, these sources are detailed in the Reference section of this paper.

Interviews:

James Burke, Ph.D., Associate Professor of the School of Food, Hotel, and Tourism Management provided Priscilla Baker's name as a key person to contact for information regarding the National Park Service's role in the response and recovery process of the 1988 wildfires of Yellowstone National Park. In conversations with Priscilla Baker, key representatives of Yellowstone were identified. The following representatives not only provided information pertaining to public reaction and official response to the wildfires in Yellowstone but also provided tangible data helpful in examining the relationship between tourism and the natural disaster of Yellowstone National Park. Gene Bryan, State Travel Director of Wyoming; Sandra Guedes, State Travel Director of the Travel Montana Department of Commerce; and Joan Anzelmo, Public Affairs Director of Yellowstone National Park.

In order to obtain further statistical data to evaluate the effect that the wildfires in Yellowstone had on tourism, two additional representatives were contacted. These

individuals were identified throughout the research process. They are Shirley Hayes from the Wyoming Department of Revenue and Taxation and Gail A. Brockbank, the Industry Service Manager for Travel Montana, Department of Commerce.

Secondary Data:

With regard to the issue of tourism activity in and around Yellowstone National Park after the fires of 1988, it was determined that it would be important to obtain and examine information that addressed visitation levels to the Park, lodging tax revenue figures and sales and use tax revenue figures for the states of Wyoming and Montana, and any economic reports with regard to non-resident travel and spending inside and outside Yellowstone National Park. This information provided statistical and tangible documentation as to the type of relationship that existed between the fires of 1988 and tourism.

In order to focus on how just one event in Yellowstone's long history affected tourism, research for this study was limited to examining only two specific windows of time. This study focused on the three years prior to the fires, 1985 to 1987, and three years following the fires, 1988 to 1990. This six year period was assumed to be adequate in examining pre-fire and post-fire visitation levels and spending in Yellowstone and it's gateway communities.

The following sections categorize the specific data obtained and used for this study.

VISITATION AND SALES INSIDE YELLOWSTONE

Visitation Levels:

Joan Anzelmo, a spokesperson for Yellowstone National Park was contacted for information regarding visitation levels to the Park prior to and following the 1988 fires. Joan provided the Yellowstone National Park Travel Table that lists visitor attendance

figures from the year 1895 up through 1990. For the reasons stated above, this study was limited to the period of time from 1985 through 1990.

As another source of statistical data with regard to Yellowstone visitation, the U.S. Department of the Interior, National Park Service in Denver, Colorado was contacted. This information source was identified during extensive research of tourism and travel journals.

The U.S. Department of the Interior provided a copy of the 1990 National Park Service Statistical Abstract. This report is published annually and contains a general summary of visitation records to national parks. Enclosed in the abstract was a ten-year report that documents annual data and the percentage changes of annual data specific to Yellowstone National Park. This ten-year report divides visitation figures into recreation and non-recreation visits. It also lists statistical data on the number of overnight stays in the Park. This information is grouped under several headings: CONCESSIONER, which is further divided into headings of lodging and camping; TENTS; RECREATION VEHICLES; BACK COUNTRY; and BUS. Again, attention was focused on the years 1985 to 1990.

Business Sales:

Two major businesses operate inside Yellowstone National Park. Hamilton Stores, Inc. has been providing Yellowstone visitors with a wide variety of merchandise since 1915. Camping and fishing equipment, film, groceries, sundries, and souvenirs are available at 14 Hamilton Stores and Photo Shops throughout the Park. TW Services has been Yellowstone's lodging concessioner since 1979. Summer operations include the Park's lodging facilities, RV park, restaurants, cafeterias, snack shops, gift shops, cookouts, and sightseeing services.

Information could not be obtained directly from either TW Services or Hamilton Stores, Inc. with regard to sales prior to and following the 1988 Yellowstone fires.

Therefore, this study relied on research collected from periodicals, general interest magazines, and published books of the Yellowstone fires of 1988. Of particular benefit, in providing information on how sales inside the Park were affected by the fires, were two books entitled Yellowstone on Fire! by the Staff of the Billings Gazette and The Fires of '88 -- Yellowstone Park and Montana in Flames by R.W. Simpson.

VISITATION AND SALES IN GATEWAY COMMUNITIES

Gross Lodging Tax Revenue:

To examine the issue of visitor spending outside Yellowstone National Park, specifically in the states of Wyoming and Montana, prior to and following the fires, it was determined that Gross Lodging Tax Revenue reports would be an effective indirect indicator. Lodging taxes are one of the most likely taxes visitors to these states will encounter and therefore provided a good indication of visitor levels following the 1988 wildfires.

With regard to the state of Wyoming, Shirley Hayes of the Wyoming Department of Revenue and Taxation was contacted. Ms. Hayes provided gross lodging tax revenue figures collected from 1986/1987 to June of 1991. In Montana, Gail A. Brockbank, the industry service manager for Travel Montana, Department of Commerce provided gross lodging tax revenue figures from mid-1987 to March 31, 1991. In conversations with both Ms. Hayes and Ms. Brockbank, it was learned that gross lodging tax revenue figures prior to the above time periods were not available because the lodging tax was not implemented by either state until 1986/1987.

When examining the gross lodging tax revenue figures provided, attention was focused on the counties or cities of Wyoming and Montana that are in closest proximity to Yellowstone National Park. This was done in order to eliminate areas that did not represent gateways to the Park. It was assumed that areas further away may be destinations in themselves and are less dependent on the Park's magnetism for

attracting visitors into their cities or towns. This study was interested in areas with a moderately high level of dependence on Yellowstone National Park for their economic well-being.

In Wyoming, two counties were chosen for this study: the county of Park, which encompasses the city of Cody and represents an eastern gateway to Yellowstone; and the county of Teton, which encompasses the city of Jackson and represents a southern gateway to Yellowstone. Montana is divided into six "countries" by the Department of Commerce with regard to collection of lodging taxes. One of the six is Yellowstone Country that consists of five counties: Gallatin, Park, Sweet Grass, Stillwater, and Carbon. There are also two eligible cities; West Yellowstone and Bozeman. This study was limited to the city of West Yellowstone and the counties of Park and Carbon because they represent the areas closest to Yellowstone National Park. The city of Bozeman was not chosen because Big Sky Ski Resort and Montana State University are located there. It was felt that because of these attractions, the city was not heavily dependent on Yellowstone National Park for their economic well-being. West Yellowstone is a western gateway and the counties of Park and Carbon are northern gateways to the Park.

The lodging tax revenue data compiled by the Montana Department of Revenue and Taxation is broken into four, three-month intervals. Due to this fact, this study limited its examination to the interval of July 1 through September 30 for both Montana and Wyoming figures. This was done for two reasons. First, the months of July, August, and September represent the months when most tourist money is spent in the Park and outlying communities. Secondly, the fires of 1988 did not officially start in the Park until June 23 and therefore, it was logical to begin with the month of July when attempting to determine what effect the fires had on tourism.

Sales and Use Tax Report:

As another source of statistical data on non-resident spending, Sales and Use Tax reports were requested from both Ms. Hayes in Wyoming and Ms. Brockbank in Montana. It was learned, in a telephone conversation with Miss Brockbank, that there is no sales tax imposed in the state of Montana. It was possible, however, to receive a copy of the 1990 Wyoming Sales and Use Tax Revenue Report from the Wyoming Department of Revenue and Taxation.

The rationale for examining Sales and Use Tax reports was that tourists, no matter what their reason is for traveling, spend money which in turn helps the economy of a community. When tourist expenditures are high, so are sales tax revenues. It was thought that this information could provide insight into whether there were noticeable declines or increases in tourist expenditures that could be accounted for by a decrease or increase in the number of tourists visiting the area.

The 1990 edition of the Wyoming Sales and Use Tax Revenue Report contained tax collection information by Standard Industrial Classification (SIC). Sales tax collections for the retail sector were provided, itemized by component. There were eight components -- Building and Hardware, General Merchandise, Food Stores, Auto Service, Apparel, Furniture, Restaurants, and Miscellaneous Stores.

This report showed that total retail sales tax collections have risen each year since 1987. Figures rose 2.3% in 1988, 3.2% in 1989, and 8.2% in 1990. However, when attempting to determine which of the eight components mentioned above would be appropriate indicators of tourism activity it was determined that it was impossible to make a distinction between resident and non-resident sales. Each components' definition was reviewed in the glossary of the Sales and Use Tax Report. Each definition made reference to resident sales. There was no distinction made with regard to what percentage of sales was made by residents and what percentage of sales was made by non-residents. Therefore, it was believed that this information should not be

included in this study. No distinction could be made between resident and non-resident sales and, therefore, no specific conclusions could be drawn on how the fires affected tourism activity and sales in Wyoming.

NON-RESIDENT TRAVEL AND SPENDING IN STATE OF MONTANA

Gail Brockbank, industry service manager for Travel Montana, Department of Commerce, was able to provide two additional sources of information that proved helpful to this study. This information dealt specifically with the state of Montana.

1990 Non-Resident Travel:

Gail Brockbank provided a copy of an economic report entitled 1990 Non-Resident Travel in Montana. The purpose of this report was to provide estimates of the economic impact of non-resident travel on Montana's economy. This report contained a comparison of 1988 and 1990 total expenditures by various sectors. The information and figures contained in this report was used as part of the post-fire analysis of tourism activity.

Montana Travel and Statistics Sourcebook:

The Montana Travel and Statistics Sourcebook covers the time period from 1980 to 1989. This volume was designed to provide information about changes in the travel, recreation, and tourism industry over the decade of the 1980's. The specific information that proved helpful to this study was data collected on the number of non-resident highway travelers entering Montana over this 10-year period. Examination of these figures was helpful in studying long-term effects on visitation to the state of Montana.

VISITATION TO GRAND TETON NATIONAL PARK

A final source of information was the Grand Teton National Park. Because of its proximity to Yellowstone National Park and because of its inclusion in the Greater Yellowstone Area, it was decided to determine whether there were any correlations between visitation to both parks. Did the media attention, the public outcry, and the political controversy over the handling of the fires of Yellowstone have an effect on Grand Teton National Park? To find out, the Chief Rangers office of Grand Teton National Park was contacted. They were able to provide visitation statistics to the Park for the period of time from 1985 to 1990.

The sources stated above represent the information sources used to examine the three issues being addressed in this study. Chapter four, Responses to the Disasters: Public Reaction and Official Action, addresses the secondary issues of the media's role, public reaction, and the actions undertaken by Mount Saint Helen and Yellowstone Officials in dealing with the disasters that affected each area. In Chapter five, the specific secondary data outlined in this chapter is analyzed. The findings in Chapter five address the issue of what kind of relationship existed between tourism and the eruption of Mount Saint Helens and the wildfires of Yellowstone National Park.

CHAPTER IV

RESPONSES TO THE DISASTERS: PUBLIC REACTION AND OFFICIAL ACTION

INTRODUCTION

With the first rumblings of Mount Saint Helens in 1980 and the start of the wildfires of Yellowstone National Park in 1988, National Forest Service and Park Service Officials, as well as local government officials, began assessing the seriousness and danger of the developments unfolding in each area. Area residents followed news of the events intently, wondering how it would affect them. As the forces of nature increased in intensity, Park and Forest Service Officials began to take the steps necessary to protect lives and property as best they could. Various areas were restricted and evacuated. After the eruptions ended and the wildfires were extinguished, Park Officials and Forest Service Officials still had much work ahead of them. Each was faced with the task of assessing the damages and determining their next steps as they began the recovery process. The remainder of this Chapter details the official response and public reaction to the natural disasters of Mount Saint Helens and Yellowstone National Park. It also discusses the strategies and programs initiated by both the National Forest Service and the National Park Service as part of their recovery programs.

MOUNT SAINT HELENS: INITIAL OFFICIAL RESPONSE

As volcanic activity on Mount Saint Helens began on March 20, 1980, scientists and emergency officials started working on plans to deal with both the possibility of a major eruption and the more immediate concern that cracking snow fields on the north side of the mountain could cause a large avalanche and flooding. At first, the top of

the mountain was closed to public access. Then, as the north flank continued to bulge, a twenty mile radius was declared off limits. Landowners within this radius were asked, by Forest Service officials, to evacuate. After the major eruption of May 18, 1980, emergency officials statewide began looking for and rescuing survivors. More than 100 people were rescued that day. County sheriffs, the Washington State Patrol, and other agencies were extremely busy staffing road blocks, evacuating flood victims, and answering questions from concerned relatives. Within weeks of the eruption of Mount Saint Helens, scientists, forecasters, and federal and state agencies began calculating the damages and initiating the clean-up task.

MOUNT SAINT HELENS: PUBLIC REACTION

Most residents who had lived in close proximity to Mount Saint Helens returned home to find that they had lost just about everything. People in the area suffered great personal losses. Many lost their jobs as well because several area industries, such as the timber industry, suffered significant damages. However, even with all the destruction, many residents returned and rebuilt their homes and lives in the Mount Saint Helens area. The beauty and serenity of the area outweighed the risk of future eruptions.

As was mentioned in the Introduction Chapter of this paper, before the eruption, Mount Saint Helens differed significantly from Yellowstone National Park in the level of tourism activity it enjoyed. Yellowstone National Park was an extremely popular vacation destination. Millions of visitors enter the Park each year. In contrast, Mount Saint Helens was less well known as a vacation destination. Most visitors were from the local region.

Due to the lower profile that the Mount Saint Helens area had, the eruptions that took place there in 1980 did not appear to cause any significant public outcry.

Research done for this study was unable to uncover any articles that addressed public concerns or reactions to the disaster, other than from local residents. One reason that may help explain this is that once the eruptions began, there was nothing anyone could do to stop them. As you will see in the case of Yellowstone National Park, there was a much different public perception of the type of disaster that took place there. Even though fire is a natural force, just like a volcanic eruption, it was the public's perception that officials had the ability to control it.

MOUNT SAINT HELENS: OFFICIAL STRATEGIES AND PROGRAMS

The Forest Service, part of the U.S. Department of Agriculture, has acknowledged the importance of preserving the mountain and its unique features. The Mount Saint Helens National Volcanic Monument was created by an act of Congress in 1982 to preserve the area as one of only a few places on earth where you can see firsthand the results of an explosive volcanic eruption. This legislation set aside 110,000 acres for scientific research, education, and enjoyment by the public.

YELLOWSTONE NATIONAL PARK: INITIAL OFFICIAL RESPONSE

As mentioned in the chronology of events section of Chapter two, Yellowstone's fire problems started early in the summer of 1988, on June 23rd. A bolt of lightning touched off the first fire, the Shoshone, and within a week three separate fires were spotted. Park rangers watched the Yellowstone fires closely, but allowed them to burn because they all fell within the guidelines of the "natural burn" policy. However, as the fires intensified Park officials began full suppression. All new fire starts were fought aggressively and firefighters worked to contain those already raging.

Firefighters from as far away as Hawaii and Florida were called into Yellowstone. The military was also called in to supplement civilian crews. As the fires continued to spread, local residents of several gateway communities were asked by the National Park Service to evacuate. Employees inside the Park were also asked to leave. The fires of Yellowstone National Park were fought by over 30,000 firefighters but nature had the upper-hand in this battle. It was Park Superintendent Robert Barbee's opinion that given the conditions that prevailed, no matter what man would have done there would have been a big fire in Yellowstone in the summer of 1988.

YELLOWSTONE NATIONAL PARK: PUBLIC REACTION

In contrast to Mount Saint Helens, Yellowstone National Park officials were faced with an enormous public outcry over the events that took place there in the summer of 1988. With the fires of 1988 came controversy. Townspeople in nearby communities threatened by the fires, such as Silver Gate, Cooke City and West Yellowstone, accused park officials of not doing their jobs and putting out the fires when they were small. Local chambers of commerce foresaw the loss of millions in tourist dollars. Sports organizations feared for the loss of wildlife and hunting ranges. People involved in operating tourist businesses wondered whether tourism would recover.

Trevor Povah, owner of Deep Well Ranch, about six miles outside of the Park, and Hamilton Stores, Inc., one of the major concessionaires in the Park, stated shortly after the fires, "The NPS blew it. Everybody's working their buns off to get things back, but there's no way they can recoup. The Park's gonna be a black forest for a hundred years"(Simpson,1989).

Residents of the region were getting weary of the fire and the constant smoke. They believed that the natural-burn policy, better known to them as the "let-it burn"

policy, was still in effect and they were angry. They directed their frustrations at Yellowstone Superintendent, Robert Barbee. According to Len Sargent, a rancher from Corwin Springs, Montana, "lost income and smoke can transform ordinary citizens into Ph.D. biologists with 30 years of experience based on nothing. Angry people don't think and it is human nature to jump on someone when something goes wrong"(Simpson,1989).

The Role of the Media:

The fires of Yellowstone National Park became a tremendous media event. Yellowstone is a very special place to millions of people and any activity that takes place there draws greater attention than a similar event somewhere else. For example, the Yellowstone fires received more attention than Hurricane Alicia that resulted in hundreds of times as many injuries and dozens of times as many deaths(Wenger & Friedman). Hurricane Alicia struck the Texas coast between August 15 and August 21 of 1983.

Between July 21 and September 21, there were more than 3,000 media representatives assisted either in person or by phone interview in Yellowstone. Every major newspaper in the U.S., foreign correspondents, many major magazines, and all the major radio and television networks were represented(Newsletter by Public Affairs Office,1991). How the story of the fires was covered was obviously of particular interest to the government officials who manage Yellowstone National Park, the tourists who visit it, and the merchants whose livelihood depends on those tourists.

Through the summer of 1988, the media filled our television sets and newspapers with stories about roaring walls of flame 200 feet high, clouds of black smoke, wildlife casualties, acres of trees engulfed in scorching flames, and exhausted firefighters fighting a seemingly hopeless battle. It appeared as if fire was consuming everything in the Park. Headlines in magazines and newspapers read, "Yellowstone

Up in Smoke"; "Incineration of Yellowstone"; "Legacy in Ashes", and "We Could Have Stopped This". Sensational news reports were everywhere. Surely, from what was being broadcasted and reported, the public was led to believe that Yellowstone National Park was gone. On the basis of media accounts, if you asked tourists and local business people of the Yellowstone area how this natural disaster affected tourism, the answer would be that tourism was ruined, possibly forever.

Actual Impact of the Fires:

As time passed and the smoke cleared, what really happened to Yellowstone was quite different from what was originally depicted. From the cost figures tabulated, the intensive media coverage, and the public anger surrounding the fires, it would be easy to conclude that nearly half of Yellowstone National Park was destroyed in 1988. However, figures, angry feelings, and media accounts can be misleading.

While it was reported that 1.1 million acres of the Park's 2.2 million acres were destroyed by the fires, mapping indicated that a maximum of 988,925 acres experienced some kind of burning. Of that, 562,350 acres was "canopy burn", meaning that the forest was blackened due to flames that climbed up to the canopy of branches to begin crown fires, destroying stands of trees. Another 372,350 acres was "surface burn", meaning that only the forest underbrush burned and most trees in the long term will survive. Burned meadow and sage/grassland totalled 54,000 acres(Fire Fact Sheet,1989). Grasses in these areas will grow back greener in the years to come, improving forage for wildlife.

The fires, in fact, enhanced Yellowstone's ecological diversity by leaving a mosaic of green, brown, and blackened areas inside the fire perimeters. Fire spotting left blackened islands surrounded by heat-brown vegetation and green, unburned areas that provide wildlife with habitat in several stages of forest. Fire is the means by which a forest renews itself. Within weeks of the fires, new ground cover was

sprouting in moist areas and thousands of pine seedlings were discovered on each acre of burned land.

There was also a great deal of initial public concern for Yellowstone's wildlife. Yellowstone's array of wildlife is one of the Park's greatest attractions, which draws millions of visitors each year. People come from all over to view and photograph wildlife in its natural habitat.

According to Park statistics, fire or smoke inhalation killed 254 large mammals, including 243 elk, 4 deer, 2 moose, and 5 bison. Although these figures appear high, the Park is home to between 30,000 and 35,000 elk and 2,700 bison (Billings Gazette, 1989). Also important to note is how quickly wildlife moved back into the burned areas. Some species were even attracted by the fires; they could easily find meals due to protective ground cover being burned away.

Biologists believe that in the long-term wildlife will benefit greatly from the fire. Yellowstone Park wildlife manager, Norm Bishop, stated that close to 80% of the Park was forested before the fires and much of the forest was mature lodgepole pine. "Mature lodgepole is kind of a biological desert. The fires released nutrients locked up in those trees back into the ecosystem" ("Yellowstone - A Year Later", 1989). The mosaic pattern of young, middle-aged, and old forests creates a wide range of habitats side by side that can support many different communities of wildlife. Chief Naturalist in the Park, George Robinson, stated that the fires not only destroyed hundreds of years of debris on the forest floor, fireproofing much of the Park for generations, but also opened up new vistas.

Many of the animals in the Park were not alarmed by the fires. Wildlife has learned to adapt to the evolution of the forest. During the 1988 fires, elk and bison often stood within several hundred yards of the flames, grazing in the meadows. It was humans who perceived the fires to be a crisis. People tend to become upset when the world as they know it changes as it did in the summer of 1988. However, George

Robinson stated that we need to adopt a less human outlook and start thinking in terms of "biological" time.

With regard to structure losses, the fires burned 3 houses, 13 mobile homes, 10 private cabins, 2 Forest Service cabins, 1 Park Service cabin, and 18 cabins in Yellowstone that were leased or owned by the Park's concessionaires (Billings Gazette, 1989). All the Park's major attractions -- thermal features, streams and lakes, historic sites, visitor facilities, abundant wildlife, and the magnificent scenery were left largely unscathed.

The losses could have been much greater had it not been for the dedication and perseverance of the thousands of firefighters who came to Yellowstone in 1988. Contrary to the misguided belief that Park officials were letting Yellowstone burn to the ground because of their "let-it burn" policy, fires were aggressively fought once it was determined that extreme burning conditions existed. Barbee stated at the time that the hysteria about the fire policy being responsible for the whole Park burning up was ridiculous. They were using high-tech firefighting methods, yet nothing was effective in overcoming the fires. It was just one of those once-in-every 50 or 100 year occurrences.

Park Service scientists contended that human policy was not to blame for the size of the Yellowstone fires. Scientists have known for decades that fires are natural to Yellowstone. While they knew that massive fires could sweep through the area, they didn't expect extensive fires in 1988 or anytime in the near future. Theories based on past fire behavior led Park managers to believe that large portions of the forest would not support a massive fire for years to come (Monastersky, 1988). Donald Despain, a research biologist at Yellowstone stated, "It's just that we had a weather situation so rare that we didn't expect it." The forest was drier than any other time this century, creating unprecedented burning conditions and fire behavior that surprised everyone.

The Park Service stated that the most unfortunate misconception about the firefighting efforts in Yellowstone may be that human beings can always control fire if they really want to (Simpson, 1989). However, the power of fire can not be overemphasized.

In summary, after the fires, not only were all of the major attractions in the park still there but the majority of the wildlife survived and park biologists were looking at the post-fire situation as a great ecological event. People who visit Yellowstone in the future can witness the regeneration of the forest. Biologists pointed out that nature has the tremendous ability to heal itself. Taking all this into consideration, how could the media have depicted the fires and their effects so erroneously, leading to such an enormous public outcry? This question, as well as other factors that contributed to the public outcry, are explored in Chapter six. Before that, however, it is important to look at Yellowstone's response to the situation it faced after the fires in the summer of 1988.

YELLOWSTONE NATIONAL PARK: OFFICIAL STRATEGIES AND PROGRAMS

As the fire season was coming to an end, Yellowstone Park officials faced another major challenge -- convincing the public that Yellowstone not only survived but was now a "new", more exciting place to visit.

Cooperative Effort:

In order to obtain information and learn more about what efforts the National Park Service initiated to encourage people to visit, Priscilla Baker, Tourism Director with the U.S. Department of the Interior, National Park Division was contacted. She explained that there was an extensive co-operative effort undertaken to inform the

public of what had happened in Yellowstone and to encourage them to visit. The key players in this co-operative effort were the Public Affairs Office of Yellowstone National Park, The Wyoming Division of Tourism, and Travel Montana Department of Commerce. Ms. Baker provided the names of key people to contact at each of these offices.

At the Travel Montana Department of Commerce, Sandra Guedes, the State Travel Director, was contacted. She was able to forward copies of ecological research papers and a marketing report titled Marketing Yellowstone National Park After the Fires of 1988. In Yellowstone National Park, Joan Anzelmo, Public Affairs Director for the Park was contacted. Ms. Anzelmo sent several brochures and fact sheets that were published as part of the promotional efforts undertaken by all those involved. However, the most comprehensive package of information received was from Gene Bryan, State Travel Director of Wyoming. Mr. Bryan was able to provide research reports such as Assessment of Tourist Reactions to 1988 Yellowstone Fires - A Household Survey and Yellowstone: A New Beginning.

Yellowstone: A New Beginning -- Public Education/Information Program:

The Wyoming Travel Commission, in cooperation with numerous public and private entities, put together a "New Yellowstone" public education/information program to restore the worldwide image of the world's first national park. Their efforts in initiating this program are documented in the report, Yellowstone: A New Beginning. This report was published by the Wyoming Travel Commission and directed to Wyoming's Governor Mike Sullivan and the Wyoming Legislature.

The 1989 Wyoming Legislature authorized a special appropriation for the Wyoming Travel Commission to carry out a public education/information program regarding Yellowstone's recovery. They did so, however, with the stipulation that the appropriation be matched by other entities, including other states, federal agencies, and

the private sector. Table 1 lists the organizations who participated in the matching funds portion of the public education/information program.

The number of cooperators who were involved in the public education/information program totalled 26. Those who cooperated in this effort included private sector businesses, such as Grand Teton Lodge Company and TW Recreational Services; independent tour operators, such as Tauck Tours; several Visitor and Travel Councils and Associations; the media, including the Casper Star Tribune; gateway communities of Yellowstone; and Federal Agencies, such as the U.S. Forest Service and the National Park Service. A complete list of cooperators is located in Table 2.

The public education/information program's wide-scale cooperative effort was highly unusual. Seldom is such a variety of agencies or entities found working together to promote one area. This was a tremendous effort to restore Yellowstone's worldwide image.

Meetings, with regard to putting together the public education/information program, began in September of 1988 and continued well into 1989. Table 3 provides a list of the key meetings and events held throughout this time period.

The public education/information program was geared to public relations as opposed to paid advertising and the message was very positive in nature: "Yellowstone is still there and very much worth visiting". It consisted of diverse activities that included research, photographic presentations, motion picture/video productions, distribution of Yellowstone Fire Fact Sheets, publicity efforts, familiarization tours, paid advertisements, personal appearances, and special events targeted towards awareness of Yellowstone and it's recovery.

Table 1

Matching Funding

National Park Service	\$150,921 ^a
TW Recreational Services	96,100
Montana Travel	112,000
Idaho Travel Council	5,000
Certified Folder Display	16,104
Jackson Hole Visitors Council	36,000
Wyoming Financial Services/Casper Star Tribune	7,176
U.S. West	10,000
United States Forest Service	8,000
Grand Teton Lodge Company	15,000
Tauk Tours	2,000
Familiarization Tour Participants (other than TW Recreational Services)	10,000
	<hr/>
TOTAL	\$468,301

^aThis figure includes a first-time ever appropriation of \$141,000 to the Tourism Office of the National Park Service for the public relations effort.

Source: "Yellowstone: A New Beginning" A Report to Governor Mike Sullivan and the Wyoming Legislature.

Table 2

The Cooperators in the Public Education/Information Program

Governor Mike Sullivan, Wyoming
Governors Ted Schwinden and Stan Stephens, Montana
Wyoming and Montana Congressional Delegations
Wyoming Legislature
Idaho Travel Council
Montana Travel
Wyoming Travel Commission
National Park Service
TW Recreational Services
U.S. Forest Service
United States Travel and Tourism Administration (USTTA)
Jackson Hole Visitors Council
Yellowstone/Teton Travel Association (YTTA)
Grand Teton Lodge Company
Gateway Communities: Cody and Jackson, Wyoming and
West Yellowstone, Gardiner, Livingston, Cooke City, MT
U.S. West
Tauck Tours
Certified Folder Display
Buffalo Bill Historical Center, Cody
Casper Star Tribune
Wyoming Financial Services
Old West Trail Foundation
Familiarization Tour Sponsors
The Media
American Automobile Association (AAA)

Source: "Yellowstone: A New Beginning" A Report to Governor
Mike Sullivan and The Wyoming Legislature. Jan. 1990

Table 3

Key Events/Meetings of Public Education/Information Program

- September 7 -- First "summit" meeting among key Wyoming travel officials in Cody.
- September 12 -- Old West Trail Annual Meeting, Butte, Mt.
- September 15 -- Meeting with Priscilla Baker, special rep to National Park Service Director and Wyoming, Montana travel officials in Billings, MT.
- September 22 -- Combined meeting of Wyoming Travel Commission and South Dakota Tourism Board officials, Newcastle, WY.
- September 29 -- Wyoming Travel Commission tour of Yellowstone, combined meeting with Montana Travel Board, Mammoth, WY.
- October 12 -- Meeting of Yellowstone/Teton Travel Association, Cody
- Fall/Winter - Extensive correspondence, telephone
1988-89 conversations, and Fax messages were communicated among Montana, Wyoming, TW Recreational Services, National Park Service, Governors' offices, Congressional delegations, USTTA and many other agencies.
- A preliminary marketing plan was developed with Montana Travel, Wyoming Travel Commission and TW Recreational Services as the key players.
- March 1989 -- Wyoming Legislature passes, Governor Sullivan signs special \$250,000 appropriation (which has to be matched by other private and public sector entities) to help with Yellowstone recovery.

Research:

First priority was a research program to determine attitudes and perceptions among potential visitors and travel-directing agencies as to what they thought about the fires and Yellowstone.

In Wyoming four individual surveys were conducted after the fires. Two were completed in October of 1988. One was a telephone survey of 100 parties who had cancelled reservations in Yellowstone to determine why and what their attitudes toward Yellowstone were during and after the fires. The information collected from this survey was used internally by the Travel Commission but was never published according to Gene Bryan, State Travel Director of Wyoming. Therefore, the results of this survey could not be obtained for this study. The other survey was one conducted by Sandra Marshall. This survey was directed towards 150 key market area AAA offices and was designed to ascertain how much information travel counselors knew about the Yellowstone fires and how that might impact Wyoming's tourism industry. It was believed that the information travel counselors conveyed to their clients had a direct impact on travel plans and could ultimately affect Wyoming's tourism industry and the state's leading tourist attraction, Yellowstone National Park.

The results of this survey indicated that 45% of the travel counselors did not believe that they had been sufficiently informed about the fire situation in Yellowstone. Also, 67% of AAA members changed their travel plans and did not visit Wyoming as a result of the fires. These findings indicated to the Wyoming Travel Commission that better efforts were needed to inform travel counselors and to assist them with their plans for 1989.

In November and December of 1988, Dr. Clynn Phillips of the University of Wyoming conducted a nationwide, random telephone survey to determine attitudes and perceptions among potential vacationers from 150 households from states west of the Mississippi River. The results indicated that the respondents were generally aware of

the fires in Yellowstone and their perception of the damage ran from moderately serious to serious. In spite of this however, when asked if the fire damage would cause the respondents to cancel a hypothetical planned trip to Yellowstone in 1989, only 31 % stated that it would, while the majority responded that it would not. (See Table 4). Dr. Phillips stressed, however, that a couple of points had to be kept in mind when interpreting these results. First, the respondents were asked to assume that they were planning a trip (hypothetical) and secondly, no attempt was made to screen or limit respondents to those with a high potential for a future visit to Yellowstone. It is possible that those respondents who did not anticipate a trip in the future could have answered the question superficially. While it would be inappropriate to use the figures tabulated as an indication of the decline in visitation to Yellowstone, it is worthy to note the positive attitude towards future visitation.

The final surveys conducted in Wyoming were "exit surveys" directed towards individuals who had visited Yellowstone in the Spring of 1989. However, as was the case with the telephone survey of 100 parties who had cancelled reservations in Yellowstone, the results of the "exit surveys" were used internally but never published. Therefore, the results could not be included in this study.

An additional research report, Marketing Yellowstone National Park After the Fires of 1988, was received from Ms. Guedes of the Montana Travel Commission and was written by David Snepenger, an associate professor of the College of Business with Montana State University. This report examined some of the immediate and longer term consequences of the fires upon future visitation to Yellowstone National Park. The data for his study was collected in four on-site surveys and one telephone survey from the Fall of 1988 through the Summer of 1989. Snepenger's findings showed that the majority of respondents thought that the Park was severely or moderately burned. However, those that had been to the Park since the fires thought that it was not as burned as those who had not been to the Park. Therefore, Snepenger concluded that it

Table 4

Number and Percent of Respondents who Indicated They Would Change Travel Plans
When Asked to Suppose They Had Been Planning to Visit Yellowstone National Park
in 1989

<u>Fire Would Cause Change in Plans</u>	<u>Sample Number</u>	<u>Percent</u>
would not change plans	103	69.1
would change plans	46	30.9
TOTAL	<u>149</u>	<u>100%</u>

Source: "Assessment of Tourist Reactions to 1988 Yellowstone
Fires - A Household Survey" Published by Clynn
Phillips, Ph.D. Dec. 1988

was important for people to come to the Park so that they could observe the effects of the fire directly. He recommended that the Park Service develop and maintain educational programs and trails that informed visitors about forest fires.

In the survey, respondents also ranked their motives for visiting Yellowstone National Park. The results showed that vacationing was the primary reason, followed by viewing nature, and then curiosity about the fires. Snepenger recommended that promotional campaigns therefore emphasize Yellowstone as a place to view nature while on vacation. Promotion about the fires should be discussed in the context of nature in action.

An additional portion of the survey dealt with determining the image respondents had of Yellowstone after the fires. It was found that the image of the Park was not greatly affected. The Park's image was still dominated by its beauty, nature, and size. Snepenger felt that promotion of Yellowstone should focus on the amenities it had to offer along with the opportunity to observe the consequences of natural fires and the role they play in an ecosystem.

Using the results of the various research efforts as a basis, the cooperative public education/information program was further developed. The following sections describe the various activities that took place. Please note that the order in which they are listed is random and does not necessarily represent a chronological order of events.

Photography:

Randall Wagner was commissioned to document Yellowstone National Park in September of 1988, before all the fires were out. Also, Bob Harvey and Diane Kelsey of In Sync Productions were commissioned to photograph and prepare a two-projector presentation of the fire fighting and initial recovery efforts.

During the Winter of 1988/89, TW Recreational Services commissioned Randall Wagner to photograph the Park and recreational activities. He was again

commissioned by the Wyoming Travel Commission to photograph Spring recreational activities in June of 1989.

Montana Travel sent their own photographic teams to the Park in the Winter of 1988/89 and the Spring of 1989.

Motion Pictures/Videos:

At the end of 1988, TW Recreational Services, with Montana Travel and the Wyoming Travel Commission as cooperators, commissioned Sage Productions to produce a 17-minute motion picture video, "Yellowstone in the Summer of 1988". Montana Travel coordinated the initial distribution of this video to travel agents, tour operators, travel counselors, and key television stations nationwide. More than 1000 videos were distributed.

Fact Sheets:

In late August of 1988, an initial one-page Yellowstone Fire Fact Sheet was prepared and distributed to key media outlets. This fact sheet was also faxed to all USTTA regional offices worldwide in September of 1988.

In October, a four-page, four-color Yellowstone Fire Fact Sheet was co-produced by the Wyoming Travel Commission, Montana Travel, and TW Recreational Services. Fifty thousand copies were distributed. Then in April of 1989, the Wyoming Travel Commission, Montana Travel, TW Recreational Services, Idaho Travel Council, and Tauck Tours cooperated on a re-design and re-printing of the Fact Sheet. Seven hundred thousand copies were printed and distributed.

Finally, the Wyoming Travel Commission, TW Recreational Services, and the National Park Service cooperated on a second re-design of the Fact Sheet into a brochure and Certified Folder Display did a free nationwide distribution of an additional 500,000 copies.

Publicity:

In June of 1988, an information center was established by the National Park Service at Mammoth Hot Springs to handle media requests. The information center was operational until November of 1988. TW Recreational Services coordinated media coverage with the National Park Service throughout and after the fires.

The Wyoming Travel Commission hired a freelance writer/photographer in September of 1988 to produce a "fire inventory" report and also to produce a series of articles for key outdoor and travel-related magazines and newspapers. They also, in an effort to take advantage of the increased attention to the area, initiated a new service, "Editors Tip Sheet", on a bi-monthly basis. Each tip sheet provided four story ideas on some aspect of Wyoming Tourism.

The Wyoming Travel Commission produced a satellite media tour from Yellowstone on July 25, 1989, which was featured on 49 newscasts nationwide and viewed by a confirmed audience of at least 3.9 million persons.

Montana Travel compiled a list of the top 100 media contacts and made certain someone had contacted each to provide up-to-date information. They also produced and distributed four Video News Releases regarding Yellowstone after the fire and commissioned an outdoor writer to produce an outdoor supplement on recreational opportunities in Yellowstone National Park and Montana.

Montana Travel and Wyoming Travel cooperated on the production of a "Yellowstone After the Fires" media kit. Three thousand specially designed media kits with information about Yellowstone and the two states were distributed internationally in April of 1989.

Familiarization Tours:

Familiarization tours were organized, conducted, and hosted by the Wyoming Travel Commission, Montana Travel, TW Recreational Services, and other

cooperators. Those who attended these various tours included domestic and international media agencies, key AAA officials, and domestic tour operators. The tours were held in the Winter of 1988/89 and the Spring and Fall of 1989.

Paid Advertising:

TW Recreational Services produced and placed a regional television campaign in August of 1988, after the south entrance of the Park was re-opened.

The Wyoming Travel Commission and Jackson Hole Visitors Council cooperated in a newspaper, radio, and television campaign in Denver, Salt Lake City, and Wyoming in May of 1989.

Continental Airlines used the 17-minute video, "Yellowstone in the Summer of 1988" on all transcontinental domestic and all international flights in June of 1989.

In June, July, and August of 1989, Wyoming Travel Commission produced and placed a 60-second radio campaign in six states surrounding Wyoming. The campaign featured a Yellowstone and regionalized Wyoming travel message.

Personal Appearances and Special Events:

Representatives of Montana Travel, Wyoming Travel, and TW Recreational Services made more than 100 speeches, presentations, and appearances before civic clubs, special interest groups, and schools throughout their respective states, the region, and nationally.

TW Recreational Services hosted a reception and showed the Yellowstone video to nearly 200 United Kingdom tour operators, travel agents, and media prior to the World Travel Market in London in November of 1988.

Wyoming Travel Commission and Governor Mike Sullivan hosted key southern California travel officials and travel media at an "Another Taste of Wyoming" reception and dinner.

A time line of the various activities involved in the public education/information program is located in Table 5. As you can see, the public education/information program initiated was a large and involved undertaking that required the coordination and cooperation of numerous entities. Gene Bryan, State Travel Director of Wyoming, was confident, though, that this effort would do the job of telling the Yellowstone story.

Besides the public education/information program, the Yellowstone recovery effort included additional, on-going educational developments inside Yellowstone National Park.

Educational Programs Within Yellowstone National Park:

Inside the Park, a multimedia exhibition was constructed at the Grant Village Visitor Center. This center features video footage of the fires and efforts made to contain them. The fire ecology exhibit presents fire as one of the factors shaping the Yellowstone ecosystem. It also consists of three-dimensional displays and relief models that depict the fires. Visitors can also find naturalist programs that include interpretive hikes through burned out areas.

For many people, the fires in Yellowstone represented a major emotional event. The Park received thousands of calls and letters from people expressing fear, anger, or sadness. Many of these letters were received from children. In response, Park Officials decided to build a Children's Fire Trail telling the story of the 1988 fires and how they would shape the park in years to come. The \$125,500 trail features interpretive exhibits and a boardwalk path that takes people through a variety of forest types, including areas that were totally burned, partially burned, and untouched by the flames. There is also access to areas that had been burned prior to the 1988 fires that allows visitors to see first-hand the long-term process of forest recovery.

Table 5

Time Line of Activities Included in Public Education/Information Program

	1988			1989			
	Summer	Fall	Winter	Spring	Summer	Fall	Winter
Research		X	X	X	X	X	
Photography	X	X	X	X			
Motion Pictures/Video					X		
Fact Sheets	X	X		X	X		
Publicity	X	X	X	X	X		
Familiarization Tours			X	X		X	
Paid Advertisements	X	X	X	X	X		
Personal Appearances and Special Events		X	X	X			

Source: Yellowstone: A New Beginning - A Report to Governor Mike Sullivan and the Wyoming Legislature.
Published by the Wyoming Travel Commission

Many wayside exhibits were constructed that deal with various aspects of the fires. Seven wayside "listening stations" have also been completed. These digital sound stations enable listeners to hear audio messages at specific sites throughout the Park. They deal with all aspects of the Park -- thermal features, geology, and wildlife, as well as, the fires.

In summary, the key issues emphasized in the cooperative recovery effort were: Yellowstone National Park offers visitors a chance to witness firsthand the ecological "rebirth" of the Park; fire plays a necessary role in the development of the Park; and the wildlife, thermal features, and spectacular scenery still exist with a new dimension added. When visitors come to Yellowstone they will be able to see more because the fires cleared new vistas. Wildlife is more visible because the fires created hundreds of meadows that attract wildlife and make it easier to spot them. The underlying message of the recovery effort was visit Yellowstone; enjoy it, explore what has taken place, and learn from it.

The following Chapter analyzes the statistical data collected for this study and provides insight into how visitation to Mount Saint Helens and Yellowstone National Park was effected, long and short-term, by the disasters that occurred.

CHAPTER V
THE EFFECT OF NATURAL DISASTERS
ON TOURISM IN
MOUNT SAINT HELENS AND YELLOWSTONE

INTRODUCTION

With the occurrence of a natural disaster comes destruction to property, lives, and landscape. As the people affected by these disasters assess their losses and begin to put their lives and property back in order, there can be little doubt that businesses suffer. This includes tourism businesses. What is less known is what effect these disasters have on the markets for the tourism product that has been affected by the disaster.

MOUNT SAINT HELENS: IMMEDIATE IMPACT OF ERUPTION

There was no doubt that the eruption of Mount Saint Helens hurt tourism businesses in the states of Washington and Oregon. One example was the town of Cougar, Washington.

In the summer, the town of Cougar is normally filled with tourists. However, that was not the case in the summer of 1980. Washington State had blocked the roads in a 20 mile circle around Mount Saint Helens to keep people out of the Red Zone, an area felt to be very dangerous in an eruption. Since the town of Cougar was inside the perimeters of this Red Zone, it suffered great economic loss. The road-block was in place until October, preventing visitors from entering the town. Lodges, restaurants, and retail stores were unable to operate at normal summer levels and therefore, did not realize the same levels of profit as in past years. During research for this study, attempts to obtain specific economic loss figures for the town of Cougar were unsuccessful.

Individual tourism businesses suffered economic losses throughout the Mount Saint Helens region in 1980. Some were fortunate to be able to rebuild and go on. Yet, there were others who were forced out of business because of the devastation caused by the eruption of Mount Saint Helens. For many small businesses, it only takes one bad year, economically, to wipe them out. Many did not have the financing necessary to rebuild or to market a major recovery campaign.

Also, privately owned and operated resorts and camps in the Mount Saint Helens area suffered losses. In total, 100 privately owned cabins, 2 lodges, and 4 to 5 summer camps were destroyed as a result of the eruption, according to Mary Wilson of the Gifford Pinchot National Forest. People would not be vacationing on Spirit Lake for a long time to come. Spirit Lake is located at the northern base of Mount Saint Helens and before the eruption was a primary recreation spot.

Curiosity Factor:

Remarkably, however, there is something about the occurrence of a natural disaster that draws people to the area affected. Curiosity seems to be the driving force; perhaps to see what's left and what's not, or to witness the power of nature, or to learn about what happened.

Research conducted for this study uncovered the fact that visitors were drawn to the mountain even before the eruptions ended. With the first rumblings of Mount Saint Helens came numerous sightseers who ventured to get a closer look. Authorities had to throw up roadblocks to keep visitors out of the Red Zone. People did not perceive there to be a real danger. They believed that volcanoes erupted only in faraway places. It was impossible to keep out the curious. They came with their cameras and binoculars in hopes of catching a glimpse of an ash eruption. With the visitors came the souvenir stands. The volcanic souvenir business began to flourish, selling vials of ash or T-shirts depicting the eruption.

Development of New Infrastructure:

After Mount Saint Helens was designated a National Volcanic Monument in 1982, the Forest Service began constructing facilities and access routes into the Mount Saint Helens area. Interestingly, it was discovered in a phone interview with Mary Wilson at the Gifford Pinchot National Forest ranger station that the Forest Service did not establish facilities so much as a means of attracting visitors but as a means of handling the large numbers of visitors who were attracted to the Mount Saint Helens area on their own. Since the Forest Service has the dual responsibility to protect the land and to provide public recreation, development resulted out of necessity, so that the Forest Service could continue to meet its' responsibilities. In their close partnership with scientists and botanists in the area, it was determined that it would be necessary for the Forest Service to oversee the development of the Mount Saint Helens area so that the natural recovery processes of the area would not be destroyed while visitors were provided with an opportunity to witness the results of the eruption.

In fact, a whole new form of tourism was developing in the Mount Saint Helens area. Before 1980, the majority of vacationers were residents of the region: children attending camp or adults who enjoyed fishing, swimming, boating, and hiking. The Forest Service maintained various ranger stations where information on hiking trails and activities was provided. Nothing more was necessary. After the eruption, however, the Mount Saint Helens area was not the same. Visitors from all over the United States, as well as several foreign countries were coming by the thousands to witness the transformation of a mountain into an active volcano.

MOUNT SAINT HELENS: LONG-TERM IMPACT OF ERUPTION

Visitors were officially first allowed into the Mount Saint Helens area in the summer of 1983. Information portals were established to assist visitors. These portals

were usually small trailers where National Forest Service employees distributed information and answered visitors' questions. An amphitheater was constructed at Windy Ridge that allowed visitors an opportunity to view the devastation, stretching from Mount Saint Helens' crater to Spirit Lake. Here naturalists told visitors the story of events that took place on May 18, 1980. The Pine Creek Information Portal was constructed to provide up-to-date information on volcanic activity and road conditions. In 1986, a temporary visitor center was constructed to illustrate the events of the eruption and provide educational information. In the meantime, plans were continuing for the construction of a permanent visitor center on the shore of Silver Lake. Silver Lake is located to the West of Mount Saint Helens.

The permanent Mount Saint Helens National Volcanic Monument Visitor Center was opened in the beginning of 1987. It is operated by the Gifford Pinchot National Forest. It contains an orientation for travelers consisting of exhibits, murals, and interpretive materials. There is a walk-in model of the volcano that illustrates its composition and a one-half mile trail outside the center that leads to a viewpoint overlooking Silver Lake and Mount Saint Helens. The center also offers a free twenty-two minute movie of the historic May 18, 1980, eruption. There are also shorter slide and tape shows that portray how scientists have made Mount Saint Helens the most closely monitored volcano in history. Visitors can observe a working seismograph transmitting data directly to the visitor center from the mountain.

Staff members of the Visitor Center inform visitors on how to find the best viewpoints of Mount Saint Helens and they also monitor road conditions to the National Monument. Also, there are talks given by interpretive naturalists and guided hikes to off-highway locations.

MOUNT SAINT HELENS - ANALYSIS OF VISITATION AND COMPOSITION:

Tourism, overall to the Mount Saint Helens area, has grown increasingly since being designated a legislative monument in 1982. The continuing development of information and educational centers has helped attract record numbers to the area. (See Figure 1). Visitation to the monument increased from 634,000 visitors in 1983 to 1,890,000 visitors in 1990. It is evident from this graph that after the permanent Visitors Center was opened in 1987, there was a significant increase in visitation to the monument. Figures rose from 700,000 visitors in 1985 to 1,156,000 visitors in 1987. This represented a 65% increase. In 1989, an 18% increase in visitation was realized and in 1990 there was a 38% increase.

There have also been significant changes in the composition of visitors to the Mount Saint Helens area. Mary Wilson from Gifford Pinchot National Forest indicated that prior to 1980, the majority of visitors were residents from the states of Oregon and Washington. However, she could not provide any statistical data to substantiate this. No records of visitation were collected or kept by the Forest Service. Since the majority of developments were privately owned and operated, the Forest Service did not have a strong interest in obtaining such information. However, after the establishment of the National Monument, recreation planners became more involved in developing the area and systems were put in place to monitor visitation levels and composition.

Mary Wilson was able to provide an analysis of 1990 visitors. (See Figure 2). In 1990, visitors from Oregon and Washington represented only 39% of total visitors while 46% of visitors were from other locations within the U.S. and 15% were international visitors.

Information with regard to which countries and what specific percentages of each were represented in the international total was not available since no breakdown

Figure 1. Visitation to Mount Saint Helens Volcanic Monument

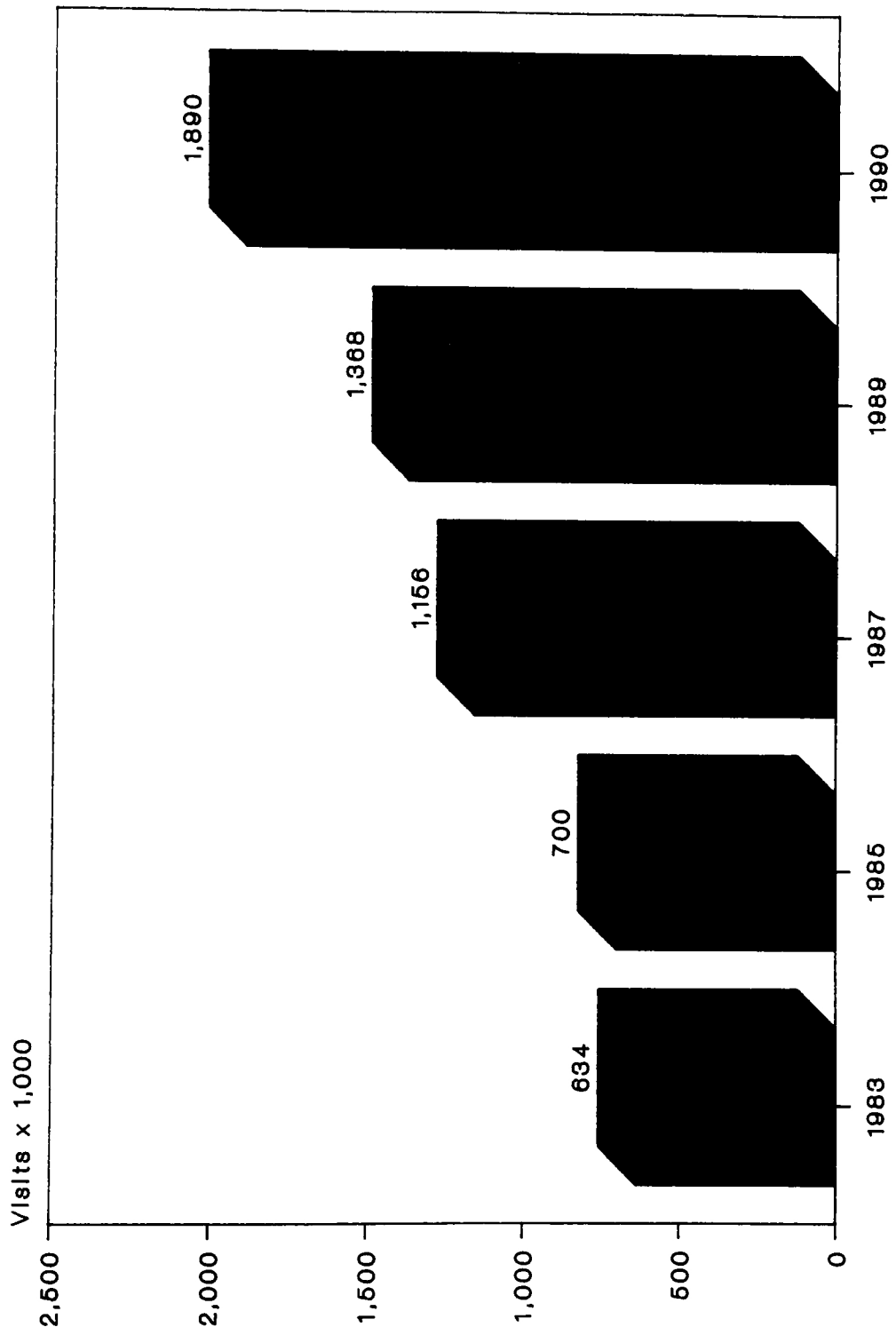
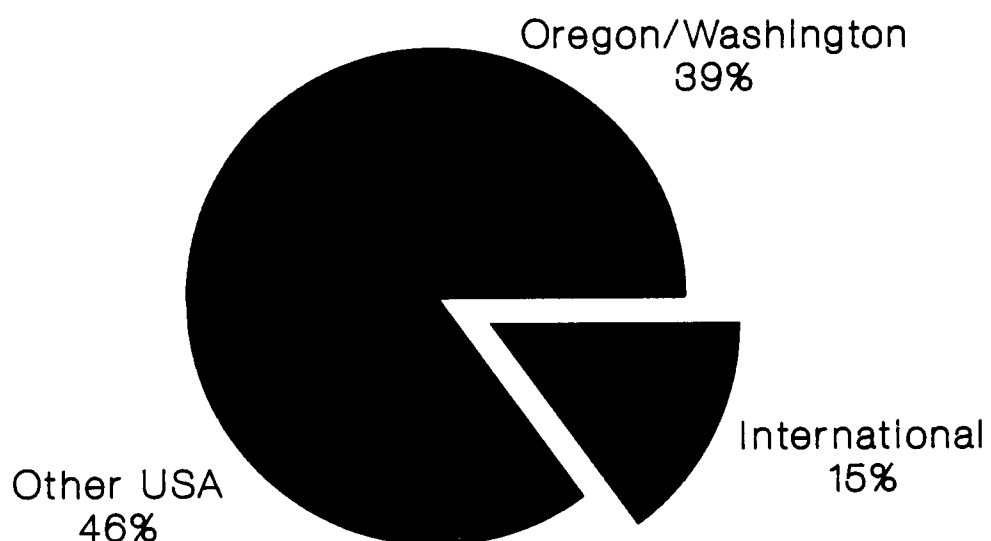


Figure 2. 1990 Analysis of visitors to Mount Saint Helens National Volcanic Monument



was done by the Forest Service. The information was simply collected from sign-in sheets located at the various information portals and the visitor center and no further analysis was done.

From the information and statistics provided, it is significant to note the development of a new tourism industry that is flourishing as a result of the 1980 eruption of Mount Saint Helens.

This new tourism industry is larger than the one that existed before 1980. Also, the type of tourist visiting the area is now different. Before 1980, people came to the Mount Saint Helens area and to Spirit Lake to enjoy camping, boating, swimming, and hiking. Today, however, damage from the eruption has severely limited these activities. The majority of the tourists who now travel to Mount Saint Helens come to visit the National Monument and to witness first-hand the power of a volcanic eruption.

The Mount Saint Helens area will never be the same. For some tourism business people, the eruption in 1980 was the worst thing that could have happened and for others, who benefitted from the new developments, it was a positive event. The varying points of view depended on whether owners were forced to close down operations or whether they were enjoying increased tourism activity (including sales) as a result of the volcanic eruption.

When examining the "big picture" of the overall tourism economy for the area, it is important to note that, in spite of individual losses, the tourism industry as a whole in the Mount Saint Helens area benefited from the 1980 eruption. Millions of visitors are now drawn to the area and with increased visitors come increased visitor expenditures.

Now, attention can be turned to Yellowstone National Park to determine what happened there regarding tourism following the wildfires of 1988.

YELLOWSTONE NATIONAL PARK: IMMEDIATE IMPACT OF WILDFIRES

There was little doubt that tourism businesses, in and around Yellowstone National Park, suffered immediately as a result of the 1988 fires. By the end of July, the fires were beginning to affect the tourism trade and residents of gateway communities were upset. A tourism season that had started off with a lot of promise had become a nightmare.

INSIDE YELLOWSTONE NATIONAL PARK

Business Sales:

From an economic viewpoint, the fires at Yellowstone could not have come at a worse time. They broke out when the tourist business was booming in early summer. Two major businesses in the park, TW Recreational Services, Inc. and Hamilton Stores, Inc. reported that the fires cost them millions.

Steve Tedder, Vice President and General Manager at TW Services, is quoted as stating that TW lost \$4.5 million in gross sales in 1988. "July, August, and September are the months when most of the money is dropped in the Park." However, the fires forced park officials to close entrances to the Park in late July of 1988 and that cut deeply into tourist revenues.

Tourist traffic dropped more than 7% in July and almost 30% in August. When the North Fork Fire threatened to destroy the Old Faithful Inn in early September, TW Services closed down its operations altogether, one month earlier than normal. They were also forced to lay off 1000 workers.

Curiosity Factor:

However, there were some tourists visiting the Park who were fascinated by the fires. They listened to Park Service naturalists talk about the role fire plays in the

ecology of forests. They snapped pictures and watched firefighting activities as if they were a regular attraction. Many tourists continued to carry on normal activities while the fires were burning and were reluctant to leave.

Mild weather and curiosity about the summer fires helped Yellowstone National Park set an attendance record in October of 1988. Attendance increased by almost 50,000 people or more than 39%, compared to the same time the year before.

Visitation Figures:

Despite these facts, examination of visitation totals shows that overall tourism to Yellowstone National Park declined significantly in 1988. (See Table 6). Total recreation visits decreased from 2,573,194 in 1987 to 2,182,113 in 1988. This represented a 15% decline. Concessionaires inside the Park realized a 16% decline in lodging stays and a 5% decline in camping stays. The Park also suffered a 28% decline in tent stays, a 28% decline in recreation vehicle stays, a 24% decline in back country stays, and a 9% decline in bus stays. The fires produced smoke, fear, and confusion and they cut deeply into the Park's tourist business in 1988.

SENIOR MARKET

Much of the tourism business in the fall of the year is senior-oriented. Senior citizens traditionally wait until September, when children are back in school, to visit Yellowstone. However, in 1988 hundreds of senior tours cancelled at the last moment. Tour directors saw the streets of towns like West Yellowstone shrouded in smoke. They were worried because seniors are more susceptible than others to respiratory problems and smoke only exacerbates such problems. Therefore, rather than risk their clients' health, tour operators cancelled scheduled trips to Yellowstone, thereby severely restricting a major tourism market during the Fall of 1988. These cancellations hurt tourism businesses outside as well as inside the Park.

Table 6

Yellowstone National Park - Ten Year Report with % Change for Annual Data

<u>Year</u>	<u>Recreation</u>		<u>Overnight</u>		<u>Back</u>		<u>RV's</u>		<u>Country</u>		<u>Bus</u>	
	<u>Visits</u>	<u>%</u>	<u>Camping</u>	<u>%</u>	<u>Tents</u>	<u>%</u>	<u>RV's</u>	<u>%</u>	<u>Country</u>	<u>%</u>	<u>Bus</u>	<u>%</u>
1985	2,226,159	-	601,849	-	194,775	-	327,086	-	32,643	-	2,951	-
1986	2,363,756	+6	598,164	-1	200,490	+3	359,962	+10	31,627	-3	3,631	+23
1987	2,573,194	+9	624,144	+4	244,825	+22	376,512	+5	32,928	+4	3,887	+7
1988	2,182,113	-15	526,690	-16	176,677	-28	269,773	-28	25,155	-24	3,519	-9
1989	2,644,442	+21	611,508	+16	204,756	+16	346,283	+28	32,986	+31	4,153	+18
1990	2,823,572	+7	640,603	+5	216,000	+5	336,026	-3	37,138	+13	4,052	-2

Source: National Park Service Statistical Abstract 1990

GATEWAY COMMUNITIES

The fires also hurt tourism in communities at the entrances to Yellowstone National Park. At various times, several of the communities along the park boundaries had to be evacuated. Ken Takata, president of the Chamber of Commerce in West Yellowstone estimated that businesses, especially retail shops, experienced 30 to 40% losses over the summer. West Yellowstone draws 15 million dollars' worth of business from Park visitors in a good year (Billings Gazette, 1989).

People who did come to West Yellowstone in late summer stayed only a few days and became discouraged and left when they learned that the Park was closed.

In a letter that was received along with information that had been requested, Gene Bryan, Tourism Director of the Wyoming Department of Commerce, stated that it was difficult for the Department of Commerce to put a handle on the effect the fires had on the gateway communities in 1988. Mr. Bryan stated that these communities were near panic at the beginning, but as the season wore on, it was his opinion that the overall economic impact was probably not that severe.

Firefighters: An Important Source of Revenue:

Mr. Bryan stated that gateway communities, such as West Yellowstone, Silver Gate, and Cooke City, benefited greatly from the firefighting agencies; the Park Service, U.S. Forest Service, U.S. Army, and U.S. Marines. The motels, restaurants, and gift shops catered to the firefighters and other officials and therefore, were able to make up a portion of what they had lost in tourist trade. There were over 25,000 firefighters in the Yellowstone area between June and September of 1988.

Most businesses were able to recoup some of their losses through sales to civilian and military firefighters and curiosity seekers. However, Milt Toratti, manager of Lionshead Resort just outside Yellowstone's west entrance, stated in a post-fire interview with the staff of the Billings Gazette that even though he was able to

provide catering services to the government he could not recover the kind of revenue tourists spend because of government imposed price ceilings on meals and the fact that no gratuities were charged.

Lodging Tax Revenue:

It is important to note that since the time the lodging tax was imposed the rate has been constant in both Wyoming and Montana. Montana has a four percent lodging tax and Wyoming has a two percent lodging tax. When examining the lodging tax revenue figures for Montana and Wyoming, it becomes clear that there were economic losses suffered by the gateway communities in 1988.

Table 7 represents gross lodging tax revenue figures for the City of West Yellowstone and the counties of Carbon and Park in Montana. In West Yellowstone, gross lodging tax revenue declined 7% between July 1 - September 30 of 1987 and July 1 - September 30 of 1988, falling from \$110,549 to \$102,747. A 4% decline was realized in Carbon County during the same time period. Park County, in contrast, realized a 14% increase. Gross lodging tax revenue declined from \$20,689 to \$19,852 in Carbon County and rose from \$69,954 to \$79,643 in Park County.

In Wyoming, the County of Teton suffered a 1.2% decline in lodging tax revenue between July 1 - September 30 of 1987 and July 1 - September 30 of 1988. (See Table 8). Lodging tax revenue of \$280,892 in 1987 fell to \$277,619 in 1988. The County of Park suffered a loss of 12% with figures falling from \$112,344 to \$98,451.

Using the numbers found in Tables 7 and 8, total lodging sales figures were determined for both Wyoming and Montana. These conversions were done in order to reflect yearly increases and losses in total lodging sales. Providing gross lodging tax revenue figures and total lodging sales figures helps to present a clearer picture of the economic impact of the Yellowstone fires on gateway communities.

Table 7

Montana: Gross Lodging Tax Revenue Between 7/1 - 9/30

	<u>1987</u>	<u>Yearly %</u> <u>Change</u>	<u>1988</u>	<u>Yearly %</u> <u>Change</u>	<u>1989</u>	<u>Yearly %</u> <u>Change</u>	<u>1990</u>	<u>Yearly %</u> <u>Change</u>
City of								
W. Yellowstone	\$ 110,549	-	\$ 102,747	-7	\$ 121,984	+19	\$ 153,760	+26
Carbon								
County	\$ 20,689	-	\$ 19,852	-4	\$ 20,723	+ 4	\$ 22,014	+ 6
Park								
County	\$ 69,954	-	\$ 79,643	+14	\$ 92,950	+17	\$ 117,160	+26

Note. Gross Lodging Tax has remained constant at 4% since 1987.

Source: Travel Montana Department of Commerce

Table 8

Wyoming: Gross Lodging Tax Revenue Between 7/1 - 9/30

	<u>1987</u>	<u>Yearly %</u> <u>Change</u>	<u>1988</u>	<u>Yearly %</u> <u>Change</u>	<u>1989</u>	<u>Yearly %</u> <u>Change</u>	<u>1990</u>	<u>Yearly %</u> <u>Change</u>
Teton County	\$280,892	-	\$277,619	-1.2	\$305,593	+10	\$422,145	+38
Park County	\$112,344	-	\$ 98,451	-12	\$ 95,395	-3	\$114,790	+20

Note. Gross Lodging Tax has remained constant at 2% since 1987.

Source: Wyoming Department of Revenue and Taxation

Total lodging sales figures were determined by dividing the gross lodging tax rate into the gross lodging tax revenue figures for each city or county. For example, Montana has a 4% gross lodging tax and the gross lodging tax revenue figure for the City of West Yellowstone in 1987 was \$110,549. By dividing 4% into \$110,549, you obtain a figure of \$2,763,725, which represents the total lodging sales for the City of West Yellowstone in 1987. (See Table 9) Carbon County suffered lodging sales losses of \$20,925 in 1988 and West Yellowstone's losses for the same year totalled \$195,050. In Wyoming, lodging sales fell in Teton County from \$14,044,600 in 1987 to \$13,880,950 in 1988, a loss of \$163,650. (See Table 10) Park County suffered lodging sales losses of \$694,650 between 1987 and 1988. Since these figures were converted from the gross lodging tax revenue figures, the yearly percentage changes remain the same.

YELLOWSTONE NATIONAL PARK - ONE YEAR LATER:

It is evident from the information in Tables 7, 8, 9 and 10 that tourism businesses in the Park and in gateway communities suffered in 1988 due to the fires in Yellowstone. Interestingly, just one year later the tourism industry seemed to be recovering.

INSIDE YELLOWSTONE NATIONAL PARK

Visitation Figures:

In 1989, a record 2,644,442 people visited Yellowstone National Park. This represented a 21% increase over 1988 figures. (See Table 6 again) Also, all but one of the overnight stay categories in the Park realized increases. It is important to note, however, that comparing 1989 visitation levels to 1987 visitation levels (the year before the fires) indicates that visitation in 1989 only rose 3%.

Table 9

Montana: Total Lodging Sales Between 7/1 - 9/30

	<u>1987</u>	<u>Yearly %</u> <u>Change</u>	<u>1988</u>	<u>Yearly %</u> <u>Change</u>	<u>1989</u>	<u>Yearly %</u> <u>Change</u>	<u>1990</u>	<u>Yearly %</u> <u>Change</u>
City of								
W. Yellowstone	\$2,763,725	-	\$2,568,675	-7	\$3,049,600	+19	\$3,844,000	+26
Carbon								
County	\$ 517,225	-	\$ 496,300	-4	\$ 518,075	+4	\$ 550,350	+6
Park								
County	\$1,748,850	-	\$1,991,075	+14	\$2,323,750	+17	\$2,929,000	+26

Note. Totals were calculated by dividing Gross Lodging Tax Revenue figures by lodging tax rate of 4%.

Table 10

Wyoming: Total Lodging Sales Between 7/1 - 9/30

	<u>1987</u>	<u>Yearly % Change</u>	<u>1988</u>	<u>Yearly % Change</u>	<u>1989</u>	<u>Yearly % Change</u>	<u>1990</u>	<u>Yearly % Change</u>
Teton County	\$14,044,600	-	\$13,880,950	-1.2	\$15,279,650	+10	\$21,107,250	+38
Park County	\$ 5,617,200	-	\$ 4,922,550	-12	\$ 4,765,750	-3	\$ 5,739,500	+20

Note. Totals were calculated by dividing Gross Lodging Tax Revenue figures by lodging tax rate of 2%.

Apparently, curiosity about post-fire Yellowstone drove much of this tourism. People were curious to see for themselves what had actually happened to the Park.

GATEWAY COMMUNITIES

Lodging Tax Revenue:

The lodging tax revenue figures for 1989 also provided an indication that tourists were returning to the Greater Yellowstone Area. In Montana, the City of West Yellowstone realized an 19% increase between July 1 September 30, 1988 and July 1 September 30, 1989. Gross lodging tax revenue figures rose from \$102,747 to \$121,984. Carbon County realized a 4% increase and Park County, a 17% increase. Carbon County gross lodging tax revenue increased from \$19,852 to \$20,723 and Park County gross lodging tax revenue increased from \$79,643 to \$92,950. (See Table 7 again) In Wyoming, Park County continued to realize a slight decline of 3% and Teton County realized a 10% increase over 1988 figures. (See Table 8 again) Gross lodging tax revenue declined from \$98,451 to \$95, 395 in Park County and rose from \$277,619 to \$305,593 in Teton County. Also, Tables 9 and 10 reflect these changes in terms of total lodging sales.

In Montana, comparing 1989 gross lodging tax revenue figures for the City of West Yellowstone to 1987 figures, indicates that gross lodging tax revenue rose 10%. Increases were .16% for Carbon County and 33% for Park County when comparing 1989 figures to 1987 figures. In Wyoming, gross lodging tax revenue in 1989 increased 9% over 1987 figures, increasing from \$280,892 to \$305,593. Park County's lodging revenue declined from \$112,344 in 1987 to \$95,395 in 1988. This represented a 15% decline.

This comparison of 1989 figures with 1987 figures is useful because it helps to illustrate that lodging tax revenue figures would have probably increased overall in 1989 in spite of the wildfires of 1988. Since the figures increased, it is accurate to

assume that the wildfires of 1988 did not negatively effect long-term visitation to gateway communities. What is more difficult to determine is how much of a positive impact the fires had on lodging stays.

It should be noted that a portion of these increases may be due to factors other than increased tourist levels. The four most likely scenarios that might explain why gross lodging tax revenues increased include: 1) an increase in gross lodging tax rates; 2) no change in occupancy but more money was spent by guests, (greater length of stay, etc.); 3) individual hotels/motels increased their room rates, thus the lodging tax revenue (which is a percentage of the room rate) increased; or 4) overall occupancy increased.

Unfortunately, it was extremely difficult to obtain the information needed to analyze each scenario and determine if, in fact, one or more of them were the cause of the increased lodging tax revenues. The only scenario that could positively be eliminated was the one where lodging tax rates increased. As mentioned earlier, it was verified with the Wyoming Department of Revenue and Taxation and the Travel Montana, Department of Commerce that the gross lodging tax rates in each state have not increased since they were initiated in 1986/87. The Wyoming Department of Revenue and Taxation and the Travel Montana, Department of Commerce were unable to provide any information or records on occupancy levels or lodging room-rate changes.

Although no specific data could be obtained, everyone contacted indicated that they felt that the number of tourists in the area had increased since the Yellowstone fires of 1988. In spite of the possibility of other factors, the important point to recognize is that lodging tax revenues did not decline in 1989. It would seem logical to assume that if the wildfires of 1988 negatively affected long-term visitation, then the figures in 1989 and 1990 would indicate further declines rather than increases. Also, knowing that visitation levels to Yellowstone National Park have increased, it would

seem likely that the gateway communities of Yellowstone would realize increases in tourism activity and spending as well.

YELLOWSTONE NATIONAL PARK: LONG-TERM IMPACT OF WILDFIRES

INSIDE YELLOWSTONE

Visitation figures:

1990 turned out to be another record year with more than 2.8 million visitors coming to Yellowstone National Park. Results from the surveys conducted as part of the cooperative education/information program, indicated that the 1988 fires were becoming much less of a motivating factor for 1990 visitors. (See page 50) This also appeared evident when examining visitation levels over the six year period of 1985 through 1990. Table 11 shows the percentage changes in visitation. In 1986, visitation increased 6% over 1985 and in 1987, visitation increased an additional 9% over 1986. Then in 1988, the year of the fires, visitation to Yellowstone declined 15%. The following year, visitation rose 21% over 1988 figures and as stated earlier, this increase was probably driven by curiosity seekers. In 1990, the Park enjoyed another record year of attendance with 2,823,572 visitors. However, the percentage change over 1989 represented a more moderate 7% increase, consistent with the increases realized prior to 1988. This may indicate that the large majority of curiosity seekers came to the Park in 1989 and that 1990 visitors were more interested in coming to the Park as they always had; to enjoy the scenery, cultural and historical sites, and wildlife. The composition of 1990 visitors was likely a combination of both curiosity seekers and more traditional visitors. No surveys were conducted to differentiate among the types of visitors who entered Yellowstone National Park or their spending habits in 1988, 1989, and 1990.

Table 11

Yellowstone National Park Travel Table

<u>Year</u>	<u># of Visitors</u>	<u>Yearly % Change</u>	<u>% Change Over 1987</u>
1985	2,226,159		
1986	2,363,756	+6	
1987	2,573,194	+9	
1988	2,182,113	-15	
1989	2,644,442	+21	+3
1990	2,823,572	+7	+9

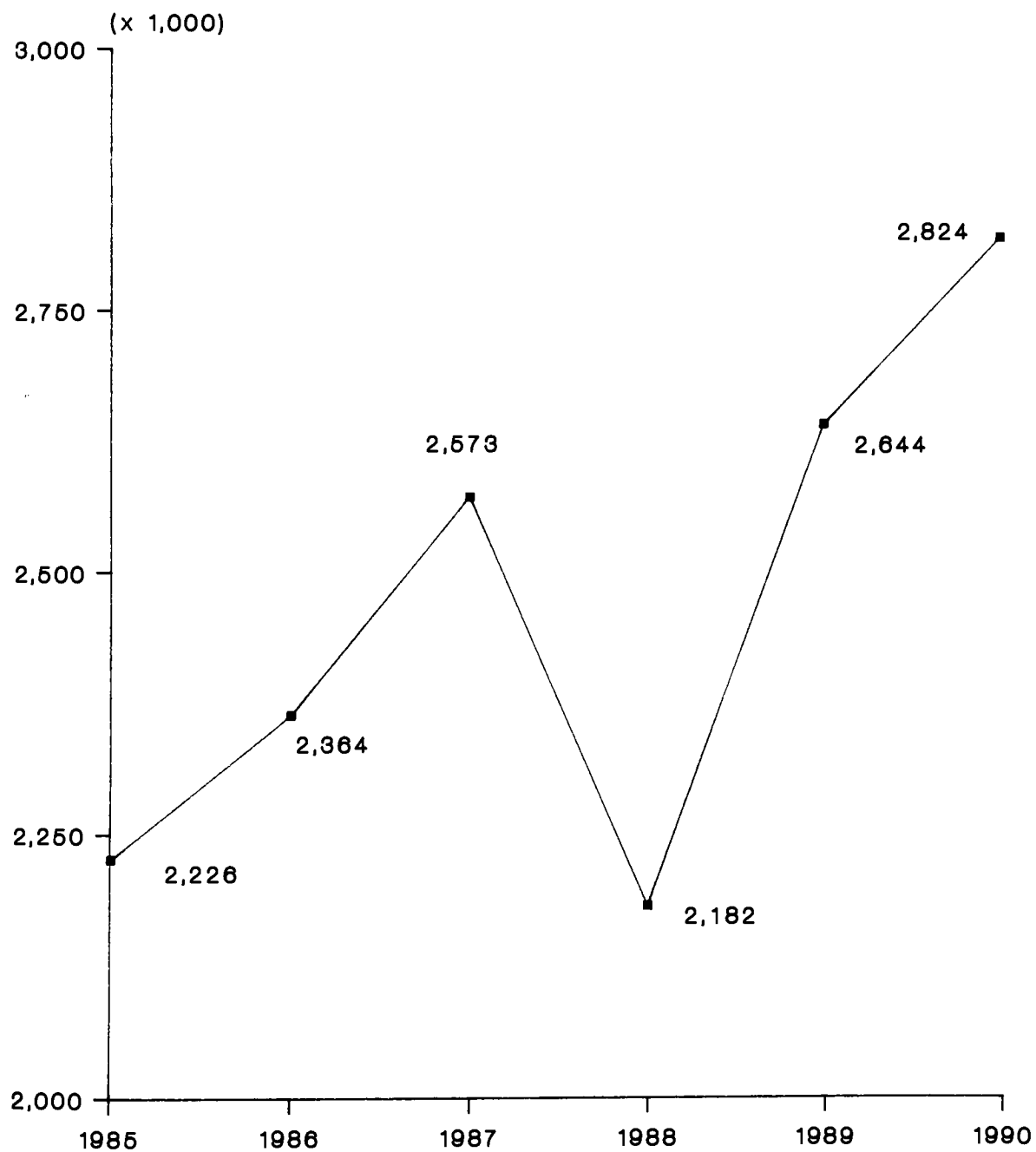
Source: Public Information Office of Yellowstone National Park

Comparison of 1989 and 1990 Visitation Figures Against 1987 Figures:

A comparison of 1987 visitation levels with 1989 and 1990 visitation levels seems to indicate that tourism to Yellowstone National Park might have increased in spite of the wildfires in the Summer of 1988. Between 1985 and 1987, tourism levels to Yellowstone increased yearly. This positive trend gave indication that these increases would continue over the next several years. However, due to the fires, visitation in 1988 dropped 15% over 1987 figures. The following year, 1989, a record 2,644,442 people visited the Park. Compared to 1988 visitation, 1989 showed a 21% increase. However, comparing 1989 figures with 1987 figures showed that the increase in visitation was a moderate 3%. 1990 figures increased 9% over 1987 figures. (See Table 11 again) These moderate increases in 1989 and 1990 visitation are consistent with the trend established between 1985 and 1987. (See Figure 3) Thus, with the exception of 1988 (the year of the fires), there have been yearly increases in visitation levels to Yellowstone National Park from 1985 to 1990.

Even though this information indicates that it was possible that visitation levels to the Park might have increased despite the wildfires of 1988, it would be erroneous to conclude that the wildfires had no positive effect on tourism levels. It is important to remember that curiosity seekers drove much of the tourism activity in 1989 and that in 1990, the fires, even though to a lesser degree, were still a motivating factor for visitors. Therefore, a portion of the increases in visitation levels realized in 1989 and 1990 can be attributed to the Yellowstone fires of 1988. Unfortunately, no surveys were ever conducted by Park Officials to differentiate what portion of visitors were in the Park because of the fires and what portion were there to enjoy the Park as they had done before 1988. The important point to recognize is that the wildfires have had a positive impact on tourism activity in Yellowstone.

Figure 3. Graph of Yearly Visitation to Yellowstone National Park



GATEWAY COMMUNITIES

Lodging tax revenue:

Gross lodging tax revenue in the gateway communities of Montana and Wyoming increased yearly as well. Table 12 lists fiscal year comparisons of lodging tax revenue generated in 1988, 1989 and 1990. There was a steady increase in each county. In Montana, the County of Carbon generated \$43,688 in lodging tax revenue for the fiscal year of 1988. In 1989, that figure rose 6% to \$46,499 and in 1990, lodging tax revenue increased an additional 11% to \$52,486. Park County lodging tax revenue increased 12% in 1989, from \$142,574 to \$162,279. In Wyoming, Teton County lodging tax revenue increased from \$769,697 in 1988 to \$819,186 in 1989, a 6% increase. In 1990, it increased an additional 15% over 1989 figures, increasing from \$819,186 to \$959,063. Park County also realized increases in 1989 and 1990. In 1989, lodging tax revenue increased from \$200,786 to \$208,912, a 4% increase. In 1990, this figure increased an additional 7%. Table 12 also lists total lodging sales for Montana and Wyoming in 1988, 1989, and 1990. Carbon County in Montana realized increases in total lodging sales of \$70,275 in 1989 and \$143,675 in 1990. Total lodging sales for Park County rose \$492,625 in 1989 and \$519,800 in 1990. In Wyoming, Teton County realized increases of \$2,474,450 in 1989 and \$6,993,850 in 1990. Park County's total lodging sales increased \$406,300 in 1989 and \$707,100 in 1990.

NON-RESIDENT TRAVEL & SPENDING IN STATE OF MONTANA

1990 Economic Report:

Table 13 contains information from the 1990 Economic Report on non- resident travel in Montana. In 1988, non-resident travelers spent \$118 million on lodging and \$178 million on food services. In 1990, these figures increased to \$128 million for lodging and \$210 million for food services. These figures represent increases of 9%

Table 12

Lodging Tax Revenue and Total Lodging Sales Generated

Lodging Tax Revenue						
	<u>County</u>	<u>Fiscal '88</u>	<u>Fiscal '89</u>	<u>%</u>	<u>Fiscal '90</u>	<u>%</u>
Montana:	Carbon	\$ 43,688	\$ 46,499	6%	\$ 52,486	+13%
	Park	\$142,574	\$162,279	+14%	\$183,071	+13%
Wyoming:	Teton	\$769,697	\$819,186	+6%	\$959,063	+17%
	Park	\$200,786	\$208,912	+4%	\$223,054	+ 7%

** Fiscal year - July to June.

Total Lodging Sales				
		<u>1988</u>	<u>1989</u>	<u>1990</u>
Montana:	Carbon	\$1,092,200	\$1,162,475	\$1,312,150
	Park	\$3,564,350	\$4,056,975	\$4,576,775
Wyoming:	Teton	\$38,484,850	\$40,959,300	\$47,953,150
	Park	\$10,039,300	\$10,445,600	\$11,152,700

Source: Travel Montana Department of Commerce and Wyoming Department of Revenue and Taxation

Table 13

State of Montana: Non-Resident Total Expenditures by Sector

<u>Expenditure</u>	<u>1988</u>	<u>1990</u>	<u>% change</u>
Food Services	\$178 million	\$210 million	+18
Lodging	\$118 million	\$128 million	+9

Source: 1990 Non-Resident Travel in Montana, An Economic Report.
Published by the University of Montana, Institute for Tourism and Recreation
Research.

and 18% respectively. Although other factors, such as price increases and inflation, may account for some of the additional money spent, it was assumed that if there were long-term negative effects on tourism due to the fires of 1988, figure in 1990 would represent decreases in total spending.

Montana Travel & Tourism Statistics Sourcebook:

The Montana Travel and Tourism Statistics Sourcebook indicated that the number of non-resident highway travelers entering Montana has continued to increase steadily since 1987. (See Table 14) In 1987, one year before the fires, 4,444,000 non-resident highway travelers entered Montana. In 1988, the year of the fires, the number increased to 4,636,000 followed by 4,750,000 in 1989. It could not be determined from this information how long non-resident travelers stayed in Montana and how much money they spent but it could be implied that the Yellowstone fires of 1988 did not have a long-term adverse effect on visitation to the state of Montana. Table 14 also provides the number of non-resident highway travelers entering Montana via the city of West Yellowstone. The numbers have increased yearly from 1985 to 1990. Again, this verifies that people were continuing to enter this gateway community in spite of the fires that occurred in Yellowstone National Park in the summer of 1988.

GRAND TETON NATIONAL PARK

The state of Wyoming receives considerable economic activity from recreation travelers because of its location on access routes to Yellowstone and Grand Teton National Parks. Therefore, a useful means of examining non-resident travel in the state of Wyoming, after the 1988 Yellowstone fire, was to review visitation levels to Grand Teton National Park from 1985 to 1990. (See Table 15). Between 1985 and 1987, Grand Teton National Park realized increases in total visitation. However, as was the case in Yellowstone, visitation in 1988 declined significantly, dropping from

Table 14

Total Non-Resident Highway Travelers Entering Montana and West Yellowstone

Entering Montana				
<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>
4,339,000	4,288,000	4,444,000	4,636,000	4,750,000

Entering Montana Via West Yellowstone:				
<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>
331,000	351,000	381,000	389,000	390,000

Source: Montana Travel and Tourism Statistics Sourcebook 1980-1989.
 Published by the University of Montana, Institute for Tourism and Recreation
 Research.

Table 15

Total Visitation to Grand Teton National Park

<u>Year</u>	<u>Total # Park Visitors</u>	<u>Yearly % Change</u>	<u>% Change Over 1987</u>
1985	2,130,210		
1986	2,180,361	+2	
1987	2,428,640	+11	
1988	2,076,698	-15	
1989	2,438,131	+17	+.4
1990	2,680,777	+10	+10
1991 (to date)	1,541,626		

Note. 1991 total figures are not published until mid-1992.

Source: Chief Rangers Office of Grand Teton National Park

2,428,640 to 2,076,698 (a 15% decline). Then, one year later in 1989, there was a 17% increase in visitation, which was similar to the increase in Yellowstone's visitation, possibly due to curiosity seekers in the region. In 1990, visitation rose an additional 10%. As in the case of Yellowstone National Park, this percentage change represented a more moderate increase, consistent with the increases realized prior to 1988. Comparing 1989 and 1990 figures to 1987 figures, showed that in 1989 the increase in visitation was only .4% and in 1990 it was 10%.

These similarities in percentage changes provide evidence of the linkage that exists between the two Parks. Yellowstone and Grand Teton National Park are clustered together and therefore, are interdependent and mutually support one another. Visitors are able to travel between these two major focal points without having to make many stops along the way. Since these attractions mutually support one another, tourism problems in Yellowstone, such as the fires of 1988, translate directly into problems for Grand Teton National Park, as well as any other attractions and communities clustered within the same region. However, the reverse is also true. Tourism benefits realized by Yellowstone National Park, as a result of the fires, are also realized by other attractions and communities in the region, including Grand Teton National Park.

Increases in total visitation to Grand Teton National Park also provided a good indication that visitors were not only interested in visiting Yellowstone National Park after the fires but were resuming normal recreational activities in the state of Wyoming, which included enjoying the recreational amenities of Grand Teton National Park.

FUTURE OF MOUNT SAINT HELENS AND YELLOWSTONE NATIONAL PARK

Visitation to the Mount Saint Helens National Volcanic Monument was projected to be 1,959,000 in 1991, a 4% increase over 1990. The Forest Service is continually developing plans for better road and trail access for visitors. The Spirit

Lake Highway is being rebuilt and will be extended an additional 22 miles. When completed in 1992, it will take visitors beyond the confluence of the Green and Toutle rivers and provide spectacular views of the mountain and its crater. Construction of Cold Water Ridge is expected to be completed in 1992 or 1993. This facility will be divided into two sections. One section will house concessions and gift shops and the other section will contain interpretive and educational displays and exhibits. Also, another facility at Johnson Ridge is in the planning stage and completion is targeted for 1994 or 1995. This facility will serve as an observatory where visitors will be able to look directly into the crater. This observatory will provide visitors with a spectacular view of the volcano.

The 1991 season for the Yellowstone National Park region also appeared to be very good for tourism. Although, projected figures were not available, an article, Tourism Trends and Yellowstone, indicated that advance reservations were similar to 1990, which was a record year. The Park expected another extremely busy year and the future outlook was good.

CHAPTER VI

DISCUSSION AND RECOMMENDATIONS

INTRODUCTION:

The findings of this study indicated that, immediately following the disasters, there were definite economic losses suffered by tourism businesses in Mount Saint Helens and Yellowstone National Park.

When viewing the impact of each disaster on a micro-level, it is evident that individual businesses experienced financial hardships following the eruption of Mount Saint Helens in 1980 and the wildfires of Yellowstone National Park in 1988. Several businesses in the Mount Saint Helens area were destroyed as a result of the volcanic eruption. Many of the businesses that survived struggled in the first few years to keep themselves from bankruptcy. In the Yellowstone area, the fires prompted Park Officials to evacuate the Park and even a few surrounding communities. Businesses dependent on Yellowstone tourism activity were unable to operate at normal levels of sales.

While this study acknowledges these individual losses, its main focus was directed at the aggregate tourism economies of Mount Saint Helens and Yellowstone National Park. The primary issue addressed was what effect each disaster had on visitation levels. As mentioned in the Introduction Chapter of this paper, it was assumed that if visitation levels increased, then the 1980 eruption of Mount Saint Helens and/or the 1988 wildfires of Yellowstone National Park shared a positive or complementary relationship with tourism. Therefore, references made in this Chapter to the effects and impacts each disaster had on tourism, reflect overall tourism activity.

DISCUSSION:

Viewing the impact of each disaster on the tourism economies of Mount Saint

Helens and Yellowstone on a macro-level revealed that in each area there were no long-term negative effects on visitation. Within remarkably short periods of time, visitors were coming to each area in record numbers. Overall, the tourism industry rebounded and, in fact, continues to expand in each situation. Since visitation levels rose in each case, it can be stated that tourism shared a positive, long-term relationship with the disasters of Mount Saint Helens and Yellowstone National Park.

Positive Impact:

One finding of great interest in this study was the fact that overall, the 1980 eruption of Mount Saint Helens was truly a positive experience in terms of tourism. As a result of this event, an entirely new and larger tourism industry developed in the Mount Saint Helens area. Prior to 1980, the majority of visitors to the area were residents of Washington and Oregon. Generations of families vacationed along Spirit Lake. However, since 1980, visitors from all over the world are now attracted to the Mount Saint Helens area. It was truly a transformation that had been unplanned by the tourism industry that existed in the area at the time. If it had not been for the eruption of Mount Saint Helens drawing people to the area, very little would have changed in terms of development. The area now enjoys the benefits of tourism to a greater extent than it did prior to 1980. This natural disaster had a very definitive positive impact on tourism.

In contrast to Mount Saint Helens, Yellowstone National Park held an appeal for a large number of American and International vacationers prior to the wildfires of 1988. From 1985 to 1987, visitation to the Park increased yearly. The tourism businesses within and outside the Park were doing well before the wildfires in the summer of 1988. After the fires, the tourism industry was understandably concerned about future tourism to the area. However, as presented in Chapter 5, tourism suffered only short-term losses and by the 1989 season the Park was experiencing record

visitation. From these findings, it was again evident that no long-term negative relationship existed between the wildfires and tourism in the Greater Yellowstone area.

Comparison of findings regarding Mount Saint Helens and Yellowstone:

In the case of Mount Saint Helens, it was concluded that a strong positive relationship existed between the eruption and subsequent tourism. However, in the case of Yellowstone National Park, it was more difficult to determine whether the relationship was positive. As demonstrated in Chapter 5, it was possible that visitation to the Park would have continued to rise in spite of the wildfires of 1988. The trend in visitation levels prior to 1988 showed that visitation was rising at moderate, yearly rates. Ignoring 1988 figures because they reflected the significant decline in visitation due to the fires, a comparison of 1989 and 1990 visitation figures with 1987 figures reflected moderate increases consistent with the trend established between 1985 and 1987. So, apparently tourism levels would have continued to increase in spite of the wildfires in the summer of 1988.

While it is possible that visitation would have continued to increase, it would be difficult to conclude that the 1988 wildfires in Yellowstone had no effect on visitation levels except for the year 1988. As a result of the fires, Yellowstone National Park has changed and will never be the same. Initially, people from all over the world were drawn to the Park and outlying communities to examine this change. Many came and continue to come to witness the ecological "rebirth" of the Park. The fires have added a new, more educational and exciting dimension to Yellowstone National Park.

Therefore, it is valid to conclude that a positive, complementary relationship existed between tourism and the wildfires of Yellowstone. Record numbers of people have come to Yellowstone National Park in 1989 and 1990 and as a result the tourist industry in the Yellowstone area has continued to enjoy the economic and non-economic benefits associated with tourism. While these benefits may be less dramatic

than in the case of Mount Saint Helens, they are nevertheless significant.

One difference between these two cases is the degree of change to each area. The Mount Saint Helens area changed dramatically. Prior to 1980, Mount Saint Helens was a serene mountain. In 1980, however, this mountain became an active volcano. As a result, large numbers of vacationers are now drawn to the area to witness such a powerful transformation. In contrast, Yellowstone National Park experienced less transformation. Those involved in the tourism industry were fortunate that the Park, for the most part, stayed the same. Yellowstone still provided all the amenities that people enjoyed before the fire. Since all the cherished amenities still exist, people continue to visit the Park as they have in the past. Also, the changes that have resulted from the fires have been promoted as beneficial and therefore have been effective in enticing greater numbers of visitors to the Park.

In both cases, the tourism industry did not sustain long-term negative impacts. Both areas have shown a positive relationship, in varying degrees, with the natural disasters that have occurred. This study of Mount Saint Helens and Yellowstone National Park provided a full range of positive aspects that existed between the natural disasters and tourism.

When examining some of the contributing factors, attention should be focused on the responsible roles undertaken by area officials and tourism businesses and associations. The Forest Service of the Gifford Pinchot National Forest began to take immediate steps in constructing facilities and access routes into the Mount Saint Helens area after Congress legislated Mount Saint Helens as a national monument in 1982. In the Greater Yellowstone Area, numerous entities cooperated in establishing a recovery program that consisted of an extensive variety of research, educational, informational, and promotional materials.

The Park Service's and the Forest Service's marketing and promotion of each respective area focused on the educational opportunities that have resulted from the

natural disasters. This fact has contributed significantly to the increased levels of visitation to Yellowstone and Mount Saint Helens. Each has attempted to appeal to visitors' desires for learning and knowledge. Mount Saint Helens and Yellowstone National Park offer visitors not only places to enjoy, relax, and recreate but also provide opportunities to learn. They have constructed information centers that contain educational displays, exhibits, and models, as well as, films and slide shows. Yellowstone National Park and Mount Saint Helens now are not only more interesting destinations to visit but are also more educational destinations.

Factors contributing to public outcry over the handling of the Yellowstone fires:

One of the secondary issues this paper addressed was the role of the media in the recovery process of the Yellowstone fires. As mentioned in Chapter four, the fires of Yellowstone National Park became a tremendous media event. Sensational news reports were everywhere and many of the media accounts were misleading. How could the media, covering the events in Yellowstone, have depicted the fires in 1988 and their effects so erroneously? It turns out that other factors also contributed to the outcry. The following section analyzes these various factors with the intent of providing a clearer picture of the events of Yellowstone in the summer of 1988.

Media:

Several research papers have been written by Dr. Conrad Smith (1989) of the Ohio State University School of Journalism that provide some interesting answers to the question of how the media could have made so many errors in their depiction of the wildfires. Dr. Smith is a specialist in the analysis of environmental reporting. He and his colleagues have reviewed, computerized, and quantitatively evaluated more than a million words of local, regional, and national newspaper coverage, as well as, all television coverage on the evening news of the three major networks with regard to the

1988 fires.

Dr. Smith pointed out that while media attention grew, important issues were lost to the drama of flames and politics. Consider the following examples of what the public heard and read. August 22, Roger O'Neil of NBC: "In towns like West Yellowstone, where merchants depend on tourists for their economic survival, there's increasing criticism of park policy of letting fires caused by nature burn themselves out." August 25, Brian Rooney of ABC: "The Park Service lets the fires burn themselves out. It's painful to watch." September 7, Bob McNamara of CBS from Cooke City, Montana: "But what still angers many is a Park Service policy to let park fires burn themselves out." What was wrong with these stories? For one, Yellowstone's natural burn policy had been disregarded a month before the earliest of these stories. Secondly, the fires mentioned in these reports (the ones in West Yellowstone and Cooke City) were never subject to Yellowstone's natural burn policy since one was started by humans and fought aggressively from the beginning and the other started outside Yellowstone, on land managed by the U.S. Forest Service.

Smith further mentioned research done by Phillip Patterson and Lee Wilkins that concluded that disaster coverage tends to focus on immediate events rather than the context in which they occur. Journalists look for angles and entertainment value.

Forest Service wildfire behavior expert, David A. Thomas, found that reporters did not dig beyond the common cliches associated with forest fires - the scorched earth, devastation, and destruction. This results in a one-sided, one-dimensional view of fire. The coverage of the fires in Yellowstone was piecemeal and the public only received a splintered view of what was happening.

Smith also noted research done by Sharon Dunwoody, a media scholar, which demonstrated that communication between scientists and journalists is often poor. According to Smith, at least two cultural perspectives interfered with good science reporting of the Yellowstone fires. The first was that all fires are bad and the second

was that nature is static; Yellowstone is a fixed landscape and can be preserved as it is. Our cultural conditioning tells us that fire is bad. This led many reporters to look for what they always seek in fire stories: victims, damage, and what caused the fire. Since there were no deaths or serious injuries, "victims" became local angry residents and inconvenienced tourists. In the absence of major structural damage, acres destroyed by fire were substituted. Accusations and rumors from local residents received top-billing in many cases because reporters spent days with these people, eating in their restaurants and staying at their motels.

Reporters treated the Yellowstone fires as a routine disaster story. Smith pointed out that since disaster victims are assumed to be impartial, reporters felt they could ignore the usual rules about covering both sides of the story, even if the victims had strong opinions and little knowledge. Also by thinking of the story as routine, reporters did not have to spend precious time seeking appropriate experts.

Many of the country's top wildfire experts were in the Yellowstone area while the fires were burning, yet local residents outnumbered scientists 2 to 1 in television stories and 3 to 1 in print stories. Both print and television journalists also interviewed more tourists than scientists. There were no interviews with experts on wildlife behavior or wildfire suppression-policy.

Overall, Smith concluded that the media coverage of the Yellowstone fires was flawed as a whole and did a poor job of informing educated, non-specialists, preventing them from arriving at informed conclusions.

Information sources:

However, to be fair it is important to point out that the media was not the only factor that contributed to the confusion. Paul Schullery, a technical writer for Yellowstone National Park indicated in his research report, The Story Itself: Lessons and Hopes from the Yellowstone Fire Media Event, that the information sources or

agencies also played a part in the misconceptions of the fires. The National Park Service, the U.S. Forest Service, and other agencies that became involved, have been fairly open about admitting that they were not prepared to handle the flood of media attention they received. During the peak weeks of the fires, the Yellowstone Public Affairs Office operated seven days a week, 18 hours a day and were assisting over 200 media representatives by phone or in-person each day. The park found it difficult to keep enough staff on hand for this once-in-a-century event.

There were also times when the agencies were confusing rather than clarifying the story. Daily maps of fire perimeters were produced on desk-top computers by Yellowstone staff. The map showed huge black blotches spreading across the landscape. Even though the text stated that as much as one-half of the area within the perimeters of the fire was not burned, the visual effect of solid blackness stayed in peoples' minds.

Local townspeople:

Another area of confusion resulted from the efforts of the National Park Service to explain the ecological benefit of the fires. Early in the fire season, the NPS explained that fire played an important role in wilderness settings. However, as the fires grew worse, the public began to interpret the NPS's statements as meaning that the Park was more important than the needs and economic welfare of the surrounding communities. Superintendent Barbee stated, a short time after the fires, that he had come to realize that when the stakes are perceived to be high, trying to hang on to the fundamental values of national parks and wilderness areas becomes more difficult. "The set up was perfect. We were going around happy-faced with stories about how great fire is. Then the fires got bigger and bigger. How could it be good when it was threatening to burn down the Old Faithful Inn, a national icon (Billings Gazette, 1989)?"

Errors were definitely made during the 1988 fire season. The media focused too much on sensationalism and entertainment. Park Officials were unprepared for the enormous media attention the fires of 1988 generated. Also, Park officials focused too much attention on stressing the benefits of fire and too little time expressing their concern for the surrounding communities. Their efforts to explain the ecological benefits of fire were misconstrued by local merchants. Local merchants were insulted by the Park Service's apparent lack of sensitivity to the needs and economic welfare of the surrounding communities. They were only too happy to express their anger through the media. However, most people would now agree that the blame for the destructiveness of the fires should be directed towards the weather conditions that existed -- a powerful combination of severe drought conditions and high velocity winds.

Cooperative Education/Information Recovery Program

An extensive recovery program such as the one undertaken in Yellowstone is very rare. It was a tremendous effort on the part of many to restore the worldwide image of Yellowstone National Park. While these efforts should be commended, there was one apparent weakness discovered in this study. A follow-up and evaluation stage was not incorporated into the cooperative education/information program.

The cooperators of the Yellowstone Recovery Program did not initiate any steps to monitor and evaluate the results of their program and therefore, there is no way of determining what contribution it made to encourage people to visit the Park. In a conversation with Gene Bryan, Tourism Director of the Wyoming Department of Commerce, he stated that because they had experienced two back-to-back record setting seasons in Yellowstone, they had not felt the need to do any follow-up research. According to Bryan, the record breaking seasons spoke for themselves and the fact that

the last two tourism seasons have been the best in recent memory, seems to speak volumes for the collective cooperative effort that was put together following the summer of 1988. However, this may be an incorrect assumption because, as stated in earlier chapters, there were a large number of curiosity seekers drawn to the Park to see first-hand the results of the 1988 fires. It is probable that a large number of these curiosity seekers were drawn to the area on their own and that their decisions to visit were not strongly influenced by the cooperative education/information program. Also, even before the cooperative education/information program was fully developed and initiated, it was determined by Dr. Clynn Phillips in his telephone survey in November and December of 1988 (see page 48) that respondents possessed positive attitudes towards future visitation to the Park in spite of the fires. Therefore, to rely solely on the number of visitors as the primary indicator of the program's success is misguided.

With a program filled with numerous and varying activities, follow-up and evaluation are essential. Those involved may have believed that never again in their lifetime would they experience a disaster such as the one that occurred in the summer of 1988. However, even if such a disaster never occurred again in Yellowstone, a proper evaluation of the program, to determine what aspects were successful and which were not, could have proven enormously beneficial to others faced with the reality of encountering a natural disaster. It was highly probable that certain aspects of the program were more effective than others, not just in terms of encouraging increased visitation but also in terms of cost.

An analysis of effectiveness would have provided important information to others on how to implement a recovery program that would satisfy their specific needs. In the area of cost effectiveness, an evaluation may have proven helpful in preventing others from possibly throwing good money after bad. Tourism budgets tend to fluctuate with economic conditions and therefore, those involved can not afford to spend money unwisely. Even if every aspect of the Yellowstone program was

successful in encouraging people to visit the Park, many tourism directors in other areas do not have the budgets to implement an entire program similar to Yellowstone's. **An evaluation system would have provided tourism officials, planners, and businesses with important information on specific aspects of the program, allowing them a means of determining which were successful and what could contribute positively to their particular circumstances.**

While this paper can provide details of an impressive cooperative effort on the part of many to encourage visitation to an area affected by a natural disaster, it can not provide specifics on what aspects were the most and least effective. The importance of evaluation should not be overlooked.

Ties between the media, local merchants, and the representative organization

It was evident from the research conducted that the media hindered the immediate recovery process in Yellowstone. The media was more interested in sensationalism than fact and did not take the time to seek out reliable sources. They presented local merchants as authoritative, knowledgeable sources of information with no effort to check their qualifications or expertise.

However, the large public outcry that resulted from the stories read in newspapers and magazines and seen on television could not be blamed solely on the media. Local tourism officials, as well as, local merchants and business people also played a role.

Ironically, as life began to return to normal in the Yellowstone area, both the media and local merchants switched tracks and began celebrating the great ecological event that the fires had created. After the smoke had cleared, they realized that the situation was not as bad as they first had thought. The motives of the local merchants and chambers of commerce this time in using the media was to lure visitors back to see the "new" Yellowstone. **It is important to note, however that they might not have**

had to work so aggressively at luring people back to the area if they had not been so loud, bitter, and visible in the electronic print media while proclaiming that Yellowstone was being destroyed.

Lessons can be learned from all three parties (Milo and Yoder, 1991). One lesson is that **it is very important for the "official" representative organization, in this case the Park Service, to plan pro-active strategies for dealing with the media.** By doing so, the representative organization will be prepared to assume its role as official source in times of crisis. A second lesson is that **all businesses involved with or dependent on the tourism industry should be supportive of their "official" representative organization.** In the case of Yellowstone, the representative organization was the Park Service, but in other situations it could be a tourism board, a chamber of commerce, or a convention bureau. If all businesses that are involved with the tourism industry are supportive of the representative organization, the likelihood of situations being blown out of proportion and incorrect information being reported declines. A third lesson is that **the representative organization should try to develop positive relationships with those involved in the media and the public it serves.** A long-term involvement with the media and the public may help build a productive relationship. In the event of a natural disaster, media representatives that share a close relationship with a destination will more likely be supportive of and knowledgeable about the destination in their reporting and coverage of the events.

Curiosity seekers

An interesting similarity discovered in this study was the presence of curiosity seekers at the events surrounding the eruption of Mount Saint Helens and the wildfires in Yellowstone. These people are unique in that they are drawn to disaster sites by an innate sense of curiosity and fearlessness of perceived danger. In Yellowstone, the fires raging in the Park were an attraction in themselves to many of these curiosity

seekers. Mary Wilson from Gifford Pinchot National Forest, stated that hundreds of people came to the Mount Saint Helens area on their own, hoping to catch a glimpse of any activity on the mountain.

Curiosity seekers can be considered a bonus to those involved in tourism businesses. After the occurrence of a natural disaster, tourism businesses and officials are in turmoil; assessing damages and analyzing the future of tourism to the area. Even before plans of action are adopted, a group of people is drawn to the area without any promotion or prompting from tourism officials. They are motivated solely by their sense of curiosity. **These people can help to rejuvenate tourism activity. Although their numbers may not be great enough to generate tourism spending to levels enjoyed prior to the natural disaster, it is certainly a beginning that requires little, if any, time and promotional effort from tourist officials and businesses. These initial visitors may also become positive spokespersons for the destination affected.** Word-of-mouth is one of the most important sources of information for vacation decision making.

Natural Phenomena

One aspect of natural disasters that seems to account for their relatively short-term negative relationship with tourism is the fact that they are "natural", resulting from natural phenomena. As discussed earlier, nature has a tremendous ability to heal itself. New life began to return to Mount Saint Helens and Yellowstone National Park shortly after experiencing powerful destruction.

Tourism officials and businesses were able to promote this "rebirth" of nature as an added attraction of visiting each area. Visitors have the opportunity to see nature renewing itself. Promoting the opportunity to witness the gradual changing of both the Mount Saint Helens area and Yellowstone National Park allows those involved in tourism to take advantage of a negative situation and turn it into a more positive

experience. If the destruction did not result in rebirth and regrowth, then the appeal of the area affected would be much less. The tourism industry may be able to attract people initially but the area would soon lose its appeal. **The fact that natural disasters result in a natural recovery process can be conceived of as another bonus for the tourism industry. Visitors can come back time and time again and with each visit they can observe the attraction at a different stage of recovery.**

It is important for tourism officials to be encouraged by the findings of this study. Not all is lost in the event of a natural disaster. Contrary to the belief that areas affected by a natural disaster are not attractive vacationing destinations, this study has shown that record numbers of people were drawn to Mount Saint Helens and Yellowstone National Park following the disasters in 1980 and 1988. Visitation to the Mount Saint Helens National Volcanic Monument has nearly tripled from 1983 to 1990. In Yellowstone National Park, visitors in 1990 totaled 2,823,572. This represented a seven percent increase in visitation from 1989. It appears evident that the natural disasters of Mount Saint Helens and Yellowstone National Park have enhanced rather than harmed tourism activity in the long-run. As seen in these two cases, there are opportunities to turn apparently negative situations into more positive tourism experiences.

RECOMMENDATIONS:

The scope of this study was narrow. **Additional research should be conducted before a conclusion can be drawn that all natural disasters share a positive relationship with tourism.** The results may prove different in a study of natural disasters that strike larger population centers. A study of such recent disasters as Hurricane Hugo and the San Francisco earthquake of 1989 could provide an interesting comparison to this study.

This paper addressed tourism in general terms. The main focus was on overall visitation levels. No distinction was made between the various categories of overnight stays in Yellowstone National Park, other than to point out increases or declines. Further research of these specific categories could provide useful information and provide an interesting study on how specific sectors of tourism activity were affected by the wildfires of 1988. **A study of each category (lodging, tents, RV's, etc.) could provide useful information regarding specific problems and opportunities encountered by each sector as a result of the Yellowstone fires. This information would benefit tourism officials who have to confront disasters.**

As a means of studying the impact of each disaster on individual tourism businesses, **more in-depth analysis of visitor spending could be done. Various categories of visitor spending, such as food, lodging, gas, entertainment, and retail sales, could be examined for a period of time prior to and following each disaster in order to uncover any discrepancies in the volume of spending.**

Linked to visitor spending levels is tax revenues. As visitor spending levels increase so do tax revenues. Therefore, **tax revenue data, such as lodging tax, sales tax, and gasoline tax revenue, could be examined more thoroughly as an additional means of determining how the economy of an area is affected by a natural disaster. A comparison of pre-fire and post-fire visitor spending levels and tax revenue levels could be done to determine if any differences exist and what impact these differences had on the community.**

Completing this study was difficult because of the lack of available information. As mentioned in Chapter three, there was very little written with regard to how the tourism industries of Mount Saint Helens and Yellowstone National Park were affected by the natural disasters that occurred in 1980 and 1988, respectively. Even less was written from a tourism perspective and when the various sources were contacted during

this study, it was discovered that information collection systems were not in place in many instances. For example, the Gifford Pinchot National Forest had no systems in place prior to 1980 to monitor the number of visitors in the Mount Saint Helens area each year. Therefore, it was not possible to provide statistical data on what the Mount Saint Helens area was like prior to 1980. This study relied heavily on information received in telephone conversations with the Gifford Pinchot National Forest and the Public Affairs Office of the National Volcanic Monument.

Mount Saint Helens also had no systems in place to analyze visitor composition beyond separating international visitors from U.S. visitors. Further analysis would be beneficial to tourism officials in the Mount Saint Helens area in order to determine which areas generated the greatest and least number of visitors. From this information, specific promotional and marketing campaigns could be developed and targeted towards these specific areas to encourage increased visitation.

In the case of Yellowstone, there were also instances where better information could have provided a clearer picture of the impact that the fires of 1988 had on tourism. It would have been helpful if the 1990 Wyoming Sales and Use Tax report had provided a breakdown of resident and non-resident sales tax collection information. This breakdown would have made it possible to distinguish non-resident sales from resident sales. This information could have helped establish a better picture of tourism activity in gateway communities after the 1988 fires. As previously mentioned, sales tax revenues increase or decline as tourist expenditures increase or decline.

There was also no information available about the numbers and types of lodging available, or the number of rooms, or the year round occupancy of lodging facilities in the gateway communities. If such inventory was collected and made available, it would have proven helpful in this study when examining gross lodging tax revenue figures. This study noted that the increases in gross lodging tax revenues could be attributed to a least four scenarios. Information, such as that stated above, might have

helped explain more accurately the reasons why the noted changes in lodging tax revenues occurred.

More questions in this study could have been answered if there was better information available. **Information collection systems should be designed and implemented which make it possible to efficiently collect and retrieve pertinent information.**

It is also important for destinations to establish a profile or inventory of businesses in operation and to update this information on a continual basis in order to ensure that the most current information is available. If a natural disaster took place, a study of the destination's pre and post-disaster inventory could provide crucial information on how severely businesses were affected by the natural disaster and help to clearly indicate what specific steps of recovery are needed.

The management agencies of Yellowstone and Mount Saint Helens, specifically the National Forest Service and National Park Service, could compile the recovery efforts undertaken in both areas into a prototype or plan of action that could be used in other natural based areas confronted with a natural disaster. It is important to learn from each experience and to put this knowledge to practical use in improving the recovery process of a natural disaster.

Furthermore, as mentioned earlier, **it is important that federal agencies recognize the importance of good public relations with the media and the communities in the area. These agencies should be interacting with the public and the media on a continual, on-going basis.** The media should know specifically who to contact at any agency for needed information and the representatives of an agency should be out visibly within the communities establishing a cohesive relationship between the agency and the communities. It is much more practical and effective to have a positive relationship established before a natural disaster takes place. If a positive relationship is already developed then it is more likely that those individuals

and entities affected by a natural disaster will work together in the best interest of all. As you could see in the case of Yellowstone National Park, the Park Service had a very difficult time convincing the gateway communities that the fires in Yellowstone were positive in any way because the National Park Service had not established a good relationship with the residents of these gateway communities beforehand.

Evaluation systems should also be developed as part of any recovery process. Once promotional activities have been initiated to overcome the effects of a natural disaster, it is extremely important to evaluate their effectiveness. If a certain promotional effort is not cost effective or is just not working as planned, steps should be in place to evaluate whether it should be discarded or modified. **It is important to recognize that this evaluation system should be in effect before it's actually needed. Precious time can be wasted if these systems are not in place, and valuable information can be lost.**

It has been stated that the lack of good data is characteristic of the tourism industry. It is important that tourism officials, businesses, and planners recognize this problem and work to change the situation. Tourism is playing such a significant role in the world today that it is crucial to collect and maintain good statistical data and records.

SUMMARY

Natural disasters can be powerfully destructive and can result in death, injuries, and loss of property including homes and businesses. It is hard to imagine any good coming from them. Yet, as this study showed, when examining their occurrences in Mount Saint Helens and Yellowstone National Park, it was found that the tourism industry on a large scale did share a positive relationship with natural disasters.

This is not to say that there weren't any negative impacts. Fifty seven people lost their lives in Mount Saint Helens and damage in each area hundreds of millions of

dollars. Communities and individual businesses suffered great financial hardships. Yet, when looking at the overall picture of the tourism economies of Mount Saint Helens and Yellowstone National Park it is important to note that they are strong and have not been negatively affected long-term by the disasters that occurred.

Tourism officials, planners, and developers spend a great deal of time and money constructing and maintaining attractions that are pleasing to the public. Most attractions are developed around the theme of fun and relaxation. However, an attraction's or destination's image of fun can quickly change into an image of destruction and tragedy with the occurrence of a natural disaster. It often seems that tourism and the benefits derived from it become victims of these natural disasters who wants to visit an area struck by a natural disaster?

It was enlightening to learn from this study that there are people interested in visiting destinations that have been affected by natural disasters and that tourism industries do not always suffer long-term negative consequences. Mount Saint Helens experienced a significant transformation from a local resident vacation area to a major worldwide destination. Yellowstone National Park may not have experienced such a dramatic transformation but the changes it did experience have been promoted in such a way as to illustrate effectively that there is still much to do and see in Yellowstone.

While the results of this study can not be used to conclude that all natural disasters will share a positive relationship with tourism industries throughout the world, it is significant for all those involved in tourism to note that it is possible for a positive relationship to result. Tourism officials of a destination can be encouraged by the fact that despite short-term losses in visitation and sales, tourism rebounded quickly in Mount Saint Helens and Yellowstone National Park. Tour operators and travel counselors should also be encouraged by the fact that a natural disaster can change a destination into a more attractive and interesting place to visit. Gateway communities dependent on tourism activity can also be encouraged because it is possible for them to

realize the benefits of increased tourism activity that may occur as a result of a natural disaster.

It was the intention of this study to provide a better insight into the relationship between natural disasters and tourism. Natural disasters are a reality and it is important for those involved in the tourism industry to recognize that violent natural events will periodically happen. It is important for tourism professionals to learn as much as possible about natural disasters so that they are better prepared to successfully contend with such events. Therefore, it is hoped that they will be able to use the information provided in this study as well as additional information available from the sources referenced at the end of this paper to broaden their understanding of tourism and natural disasters. Tourism destinations may not only survive natural disasters, such as the eruption of Mount Saint Helens and the wildfires of Yellowstone National Park, but may actually enjoy stronger tourism activity and sales.

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