

The Development of Snowmobile Policy in Yellowstone National Park

by Michael J. Yochim



Yellowstone National Park is a spectacular place in winter. Sub-zero temperatures clash with steam from the park's numerous hot springs and geysers to create frosted ghost trees and a winter wonderland. The thermally-warmed open rivers and bare ground shelter wildlife in the hostile winter environment. As temperatures drop, wildlife migrate to the lower elevations along the roads and rivers, making them highly visible to the winter visitor.

For much of the park's early history, the harsh temperatures and high snowfall discouraged humans from visiting during winter. After World War II, however, Americans' interest in winter recreation surged, and their ability to cope with the extreme conditions improved with technological advances. Yellowstone saw these trends as well, and began to allow winter visitors to enter the park on motorized oversnow vehicles beginning in 1949. Since then, visitation has steadily climbed, peaking at 143,000 in the winter of 1993-94. While still a small portion of Yellowstone's annual visitation, winter is now a popular time to visit—so popular that Yellowstone admits more snowmobiles than all other national parks combined.¹

Yellowstone's winter visitation program has become controversial, with most of the concern focusing on snowmobiles and their associated noise and air pollution, and the possibility of snowmobiles displacing the park's wildlife. Amid the debates over snowmobile use in Yellowstone, surprisingly little information has been known about why Yellowstone's administrators allowed snowmobiles into the park in the first place. For my Master's thesis, I decided to investigate this topic, and to trace the developments in the park's snowmobile policy to the present. I also examined the snowmobile policies of other national parks. This article will summarize these topics, and conclude with a discussion of the story and illustrations it provides to us today. Most of this story is new to historians, not having been researched before.

First Snowmobile Policy: 1940 to 1971

After the Second World War, increased prosperity and leisure time enabled Americans to travel to their national parks in record numbers. In Yellowstone, visitation doubled from its pre-war peak of 500,000 visitors in 1940 to more than one million visitors in 1948. The surge in

visitation led business owners and associated politicians in the Cody, Wyoming area to reason that, if Yellowstone were open to automobiles year-round, they would see their profits from tourism revenues spread throughout the year. Consequently, in 1948 they called upon the Yellowstone administrators to plow the park's roads year-round.²

Yellowstone's administrators and the Bureau of Public Roads (BPR, now Federal Highways) responded with a report analyzing the costs and feasibility of plowing the park roads in winter. The report concluded that plowing would not be feasible, because the park's road standards were too poor to permit effective plowing, the buildings in the park interior were not winterized, and plowing would be too dangerous.³

The report settled the matter for eight years. Meanwhile, snowbound residents of the communities outside the park built the first "snowplanes." Snowplanes were vehicles composed of a two-person cab on three large metal skis with an airplane propeller mounted on the rear that blew around the area's snow-covered roads without ever "taking off."⁴ The touring possibilities of the unusual vehicles became obvious; in January 1949, 35 visi-

tors entered the park in 19 snowplanes from West Yellowstone. The superintendent of the park prophetically reported that “it appears that this mode of travel is becoming more popular.”⁵

Snowplanes were the only oversnow vehicles in the park until January 1955. That year, Harold Young and Bill Nicholls of West Yellowstone received permission to use the first snowcoaches in the park. Snowcoaches were large vehicles made by the Bombardier Company of Quebec, Canada, capable of carrying 10 people in a heated interior. Calling the snowcoaches a “good tourist gimmick,” Young and Nicholls took up to 500 visitors per winter through the park in this manner in the 1950s.⁶ AmFac, the park’s main concessionaire today, still uses the same or similar vehicles.

In 1955 the National Park Service (NPS) launched its Mission 66 program. Largely a program of development to serve the needs of increasing numbers of visitors to the national parks, Mission 66 also sought to disperse visitation throughout the year, in an effort to take some of the pressure off the parks in summer. In Yellowstone, local politicians used Mission 66’s idea to renew their calls for plowing park roads in 1957. In response, Yellowstone’s administrators formed a “Snow Survey Committee” to study the matter. On the committee were representatives of Yellowstone and federal and regional highway departments. After traveling around the park observing its traveling conditions, the committee recommended in 1958 that plowing would be “feasible but not practical,” citing many of the same reasons as the 1949 BPR report did.⁷ This report settled the matter for the next six years.

In 1963 the first visitors on snowmobiles entered the park. Known as Polaris “Snow Travelers,” the vehicles were the direct predecessor of modern snowmobiles in that they were a toboggan driven by a motor. Such vehicles became popular very quickly, enabling visitation to jump from about 1,000 oversnow visitors in 1963–64 to more than 5,000 just three winters later.⁸

In January 1964, six senators representing the states on U.S. Highway 20 (which connects with Yellowstone Park’s roads) along with Wyoming Governor

Clifford P. Hansen called upon the NPS and Department of the Interior to reconsider the decision against plowing park roads.⁹ Park administrators embarked upon a third round of cost estimates, visitor use estimates, and debates about policy. The intensity of the debate this time drew NPS Director George Hartzog into the fray. Hartzog organized the Tri-State Commission, a group of high-level NPS officials and regional government representatives. After meeting several times to discuss the feasibility of plowing the roads, the Tri-State Commission meetings culminated in a congressional hearing on the matter in Jackson, Wyoming on August 12, 1967.¹⁰

Hartzog began the hearing by stating the position of the NPS: first, the form of transportation in winter in Yellowstone should be that which was most appropriate to the park and the park visit; and second, oversnow visitation was, unless shown otherwise, the appropriate means of visiting the park in winter, since oversnow vehicles travel on top of the snow rather than in the trench that plowing would create of the roads in winter. Senator Gale McGee of Wyoming, who chaired the hearing, spent the remainder of it accepting oral and written comments from chambers of commerce in the Yellowstone area and in the state of Wyoming, all of which supported plowing. Chambers from as far away as Logan and Salt Lake City, Utah, and Amarillo, Texas sent statements in support of plowing,

believing that plowing the roads through Yellowstone would stimulate traffic on the same highways in their communities.¹¹

After the hearing, Yellowstone’s administrators gave serious consideration to keeping park roads open from October through the end of December. Superintendent McLaughlin hoped that, by doing so, “most people, particularly the Wyoming Congressional Delegation, will settle down for the next several years and maintain some semblance of peace and quiet.”¹² Despite McLaughlin’s recommendation to go ahead with this compromise, “the Director’s Office...advised there will be an unqualified ‘no’ on winter road openings in Yellowstone...The basis of this is the restriction on funding levied by Congressional Committees.”¹³

Consequently, park administrators spent the following winter admitting oversnow vehicles as before. In March, 1968, though, they convened an all-day meeting at Mammoth Hot Springs to formalize a winter use policy. The policy they discussed and implemented in the next three years would consist of three parts: 1) formally permitting and encouraging visitation to the park’s interior by oversnow vehicles instead of automobiles; 2) grooming the oversnow roads to make them more comfortable for travel; and 3) authorizing the park concessionaire to open a lodging facility for overnight use at Old Faithful.¹⁴ Their reasoning for these decisions follows.



Snowplane 1957. Highway maintenance supervisor Charlie Shumate of Colorado at West Thumb Geyser Basin. The propeller is in motion at rear (left). NPS photo.



Early snow groomer 1975. By 1971, the NPS began to groom the roads regularly in order to make travel by over-snow vehicle more comfortable. This is one of their early grooming machines. NPS photo.



Old Faithful Snowlodge 1972. In 1971, the Yellowstone Park Company opened the Snowlodge at Old Faithful to provide overnight accommodations. Note the temporary "Snow Lodge" sign covering the more permanent sign beneath, which probably said "Campers Cabins." In 1973, the company permanently renamed the building "Old Faithful Snowlodge." It was torn down in 1998. NPS photo.

Yellowstone's administrators chose to allow oversnow vehicles rather than automobiles largely because plowing park roads would make them into "snow canyons"—plowed trenches with tall berms of snow on the sides that would be difficult for automobile passengers to see over. They felt that those snow canyons would be obstacles to migrating wildlife and would trap them on the road, making driving hazardous.¹⁵ Furthermore, they felt that plowing the park's roads would have the disadvantages of only serving those who were traveling *through* Yellowstone, and of causing the townspeople of West Yellowstone to suffer economically.¹⁶ They also considered restricting the park to skiers and snowshoers only,

but felt that this would have been too exclusive, since few people could ski or snowshoe the long distances necessary to view the park's major attractions.¹⁷ Because "public pressure to open the park gave [them] little choice," they chose to go with oversnow vehicles as a compromise. In this way, the public could view Yellowstone, but the park's administrators could keep the highways from becoming busy thoroughways.¹⁸

Oversnow vehicles tend to move the snow over which they travel, creating very bumpy, rough roads. To smooth the roads, the Yellowstone Park Company (YPCo.) had experimented with various means of road grooming, which were all generally ineffective.¹⁹ Park administra-

tors began to investigate better ways of grooming. Using the technical assistance of Midwest snowmobile groups, the NPS purchased the park's first grooming machines, and began grooming the roads by February 1971.²⁰ Besides making travel more comfortable, grooming the park roads also encouraged snowmobilers to stay on them rather than seeking a smoother surface off road, thereby trampling native vegetation.²¹

Meanwhile, demand had become so great for a place to stay overnight at Old Faithful that some visitors camped out in the only heated building there—the public restroom.²² After extensive discussion with the NPS, the YPCo. opened the Old Faithful Snowlodge on December 17, 1971, for its first winter season. It chose the "Campers Cabins" building because that was the only hostelry at Old Faithful that was even partly winterized.²³ Open through March 19, 1972, the Snowlodge featured "simple, pleasant and comfortable lodging spiced with hearty western food and beverage and nature's grandest winter display...Single, twin and triple rooms are available. All are convenient to centrally located bath facilities."²⁴ It was the Campers Cabin building with a new name,²⁵ featuring 34 dorm rooms without bath occupied in summer by employees. The YPCo. decided against opening all or part of the famous Old Faithful Inn because it would have needed extensive winterizing.²⁶ (AmFac razed the original Snowlodge in April 1998, replacing it with a more comfortable and architecturally pleasing building.)

Superintendent Anderson and his staff promoted the park's snowmobile program by arranging a visit by Lowell Thomas, a well-known radio commentator of the time. Thomas visited Yellowstone in winter, 1969, and discussed his visit on several subsequent radio broadcasts.²⁷

By the end of the 1971–72 season, Yellowstone had responded to the persistent pressure to open the park by encouraging oversnow vehicles as the winter mode of transportation. Maintenance staff provided smooth roads, and the YPCo. provided comfortable lodging and dining facilities at Old Faithful. These efforts to make the park available to the public in winter paid off, for pressure to plow park roads largely disappeared from this point

forward. By the end of that winter season, more than 25,000 people had visited the park.²⁸

Challenges to the New Snowmobile Policy: 1967–77

The increasing numbers of visitors brought a corresponding increase in snowmobiles—as many as 30,000 in the winter of 1973–74 (three times the number as had entered just five years earlier).²⁹ With more snowmobiles came more reports from park visitors and staff of problems such as noise, air pollution, and effects on park wildlife. The managers responsible for carrying out the new policy responded to these concerns as best they could while adhering to the policy.

The snowmobiles of the early 1970s were very noisy, sometimes emitting as much as 100 decibels of noise at a distance of 50 feet with a full throttle—a level that would seem as loud as a jet.³⁰ Complaints from visitors attempting to enjoy the winter silence and from field rangers were common.³¹ Superintendent Jack Anderson acknowledged that “everyone pretty well agrees that [snowmobile noise] is a very disturbing factor for those who are attempting to enjoy the peace and quiet of the winter wilderness.”³² However, he felt powerless to improve the situation, since “reduction of noise and air pollution must await mechanical improvements by the manufacturers.”³³

Air pollution from snowmobiles also became a problem, especially at Old Faithful and the West Entrance. Warning park administrators of the air quality problem were some field rangers such as James Fox, who wrote to his supervisor in 1970: “A great deal of exhaust smoke is produced by most snowmobiles...when many machines enter the park in a single day, a foul-smelling blue pall of smoke hangs over the entrance for most of the morning.”³⁴ Adhering to the new policy, Anderson stated (though not in direct response to Fox) that “conditions have not, however, become uncomfortable for breathing” in the park.³⁵ He again felt helpless to improve the situation, since the technological improvements necessary to clean up snowmobile emissions were out of his control.³⁶



Snowmobiles at West Entrance 1972. Snowmobiling in Yellowstone increased exponentially in the 1970s. Here, the man at left is registering at the self-registration station while his friends wait. NPS photo.

Park staff were also concerned that snowmobiles could be displacing and harassing park wildlife and damaging the vegetation. Resource management specialist Edmund J. Bucknall discussed some of the problems in a memorandum to the chief park ranger on March 16, 1970: “The combination of noise and offroad operation of these [oversnow] machines is causing serious disturbance all through the Madison valley winter range...elk are spooking even from the far side of the river at the sound of an approaching snowmobile.”³⁷ The number of research papers from the early 1970s investigating snowmobile effects upon wildlife indicates that Bucknall’s concern was well-founded. According to James W. Caslick, who surveyed literature on snowmobile effects upon wildlife, “much of the literature on this topic dates from the 1970s, when snowmobiles were new on the winter scene. There was a flurry of related papers, particularly from the Midwestern states...Reports sometimes conflicted with previous findings, but there was general agreement that winter recreation, particularly snowmobiling, had great potential for negatively impacting wildlife and wildlife habitats.”³⁸

In response to the complaints of the public and his rangers, Anderson directed park biologist Glen Cole to initiate re-

search into these problems. Cole reported: “My field observations suggested that the elk that used areas near roads became habituated to snowmobiles...Displacements of these animals were mostly confined to the road plus surprisingly short distances.”³⁹ In contrast, Keith Aune, a graduate student at Montana State University, examined the topic in the late 1970s for his master’s thesis and concluded that snowmobiles harassed wildlife, displaced them from areas near snowmobile trails, and inhibited their movement across trails.⁴⁰

Based on Cole’s findings (Aune’s were issued after Anderson retired), Anderson adhered to the new policy, which specified that snowmobiles must remain on the snow-covered roads.⁴¹ It also meant denying permission to the YPCo. to open a snowmobile rental at Old Faithful because that “would, in effect, turn the Old Faithful area into a recreational area with snowmobiling the principal activity and this is not the basic objective in making the Old Faithful area accessible...for public use in the winter.”⁴² Anderson opened the Old Faithful Visitor Center for its first winter season on January 1, 1971 to provide information to visitors.⁴³

Anderson upheld his park’s new policy while attending to the concerns associated with rising snowmobile use. Some statements he made in an interview with



Superintendent Anderson snowmobiling in 1972. Anderson personally liked snowmobiling and was out in the park on a regular basis. Here he talks to some park visitors at Old Faithful. NPS photo.

Derrick Crandall of the Snowmobile Safety Certification Committee in 1977, two years after he retired from public service, seem to conflict with his actions as superintendent. In that interview, Anderson labeled the complaints about snowmobile noise “baseless,” suggested that those complaining ski another 100 yards to escape the noise, and said, “All it takes is a pair of earplugs to solve that real quick.” He also felt that complaints about wildlife harassment were “emotionalism” and “never supported by fact.”⁴⁴ He said that snowmobiling is “a great experience and a great sport, one of the cleanest types of recreation I know.”⁴⁵

Yellowstone’s administrators were not alone in struggling with the use of federal lands by off-road vehicles (ORVs), which exploded in the early 1970s. Land managers nationwide struggled with this issue. President Nixon attempted to give them some direction in 1972 with Executive Order (EO) 11644, which established federal policy regarding the use of ORVs on public lands. It clearly specified that snowmobiles were ORVs, and outlined the resources and issues that land managers should consider in allowing ORV use.⁴⁶

Anderson was one of the first park superintendents to respond to the EO. In a decision published in the Federal Register dated May 7, 1974, he designated all of Yellowstone’s interior roads as snowmobile routes.⁴⁷ One month later, NPS regional director in Denver followed up on the EO with a memorandum suggest-

ing that all Rocky Mountain superintendents should have environmental assessments on snowmobile use prepared for their parks.⁴⁸ I could not find a response from Anderson to the regional director in the historical record, nor could I find evidence that he prepared the suggested EA.

Providing an interesting contrast to Yellowstone are the actions of Glacier National Park administrators regarding the executive order. Responding to the regional director’s memorandum, Glacier conducted an EA on snowmobile use in 1975. At the time, there were up to 1,300 snowmobiles visiting the mountain park each winter. As part of the EA, Glacier held two public meetings on the matter and gathered written public input. Glacier noted the following problems caused by snowmobiles: wildlife displacement, trampled vegetation, air and noise pollution, conflicts with other park users, the need to groom roads, and the fact that snow compaction caused by snowmobiles would make spring plowing more difficult.⁴⁹

In 1975, Glacier’s officials decided to ban snowmobiles from the park, primarily because they disrupted the solitude of the national park in winter: “Over 90% of the comments opposed to snowmobile use related that concern to silence, tranquillity, or in other words, aesthetics. Because aesthetics are an emotion, a feeling, it is impossible to quantify [*sic*]. However, it is a very valid concern, and the National Parks represent, above all other values, an emotion, a feeling, which Americans can obtain only in a handful of other natural scenic places.”⁵⁰ The officials confirmed their decision with two more hearings and further public comments in 1976-77, and formalized the ban in 1977.⁵¹ It remains in effect today.

Other national parks, including Yosemite, Sequoia/Kings Canyon, and Lassen National Parks, responded to public opinion by eliminating snowmobiles during the same period.⁵² In contrast, Rocky Mountain National Park decided to permit snowmobiles on the west side of the park.⁵³

Clearly, national park managers have struggled with the issue of snowmobiles. Furthermore, policies on snowmobiles differ among national parks, illustrating that superintendents are not bound by the

decisions of their peers. Anderson’s post-retirement remarks on this topic are worth noting: “I’m a little upset with some of my fellow superintendents. I sometimes think they are getting lazy when they want to ban snowmobiles simply because they are motor-powered vehicles...they just don’t want to get involved because it sets up a debate and ... creates work for land managers.”⁵⁴

Before retiring in 1975, Anderson received the International Snowmobile Industry Association’s first International Award of Merit for his “enlightened leadership and sincere dedication to the improvement of and advancement of snowmobiling in the United States.”⁵⁵

Expanding the Snowmobile Program: 1975–82

John Townsley took the superintendency of Yellowstone upon Anderson’s retirement and continued promoting the park’s winter program. He expanded the NPS winter operation by purchasing more grooming machines and having his staff groom the roads in the evening hours, when falling temperatures would freeze the snow as it was groomed, producing a more durable snow road.⁵⁶ To provide for the needs of the increasing numbers of winter visitors, he opened warming huts at Canyon and Madison and expanded interpretive services at the huts.⁵⁷

Townsley authorized the concessioner to expand its involvement in the winter operation as well. The company expanded the capacity of Old Faithful Snowlodge by opening additional cabins and the Snowshoe Lodge, a summertime employee dormitory, for guest use. The company also reopened the Mammoth Hot Springs Hotel for winter use in 1982.⁵⁸ The hotel had been open continuously from 1966 to 1970, but the YPCo. closed it in 1970 because the winter season at that time was a pronounced business failure.⁵⁹ Both the hotel and the Snowlodge remain open in winter today.

Townsley defended the winter use program from possible shutdown by James Watt, Secretary of the Interior under President Reagan, who wished to save federal funds. After Townsley took him on a tour of the park in December, 1981, Watt decided to keep the park open in winter.⁶⁰

Like his predecessor, Townsley set some limits to the winter program. He denied a stuntman permission to jump a snowmobile over Old Faithful while it was erupting,⁶¹ and banned dogsleds from the park to protect the dogs from snowmobiles.⁶² Concerns about air and noise pollution and wildlife impacts were present during Townsley's tenure too.⁶³ The park's bison evidently began using Yellowstone's hard-packed snowmobile routes to travel upon around 1980. Although he labeled this habit a "strange quirk,"⁶⁴ Townsley supported Aune's research into snowmobile effects upon park wildlife.

In recognition for his efforts, Townsley too won the International Award of Merit from the International Snowmobile Industry Association (ISIA) in 1982, shortly before he died. In presenting Townsley with his award, ISIA Chairman M. B. Doyle said "Snowmobilers, local tourism industry leaders and other governmental officials...recognize his personal commitment to bringing persons enjoying a variety of outdoor winter activities into harmony with each other and the park resource they are experiencing."⁶⁵

The First Winter Use Plan: 1983–92

Robert (Bob) Barbee became superintendent of Yellowstone in 1983. During his tenure, winter visitor use doubled from 70,000 persons to 140,000 visitors per winter. To deal with the problems of increasing visitation, Barbee commissioned the first compilation of winter use management guidelines and the park's first *Winter Use Plan*.⁶⁶

As the first step, Barbee and his staff summarized the scattered pieces of Yellowstone's snowmobile policy in the *Existing Winter Use Management Guidelines, Inventory & Needs*. The document, issued in 1989, reflected the concerns at the time about the impacts of winter use on the park and the lack of ongoing research projects aimed at identifying the current and potential impacts of such use.⁶⁷

In 1990, the NPS issued the *Winter Use Plan Environmental Assessment*. A core team of ten persons authored the plan: five from the Denver Service Center, three from Grand Teton National Park,

two from Yellowstone, and one from the regional office. The plan made few changes in Yellowstone's winter program, and arguably did not address the concerns raised in the *Existing Winter Use Management Guidelines, Inventory & Needs* issued a year before. For example, Yellowstone administrators did not initiate the research projects suggested in the previous document, perhaps due to a lack of adequate funding.

Yellowstone's administrators themselves did not wholly approve of the *Winter Use Plan*. In a memorandum to a member of the core team, Chief Ranger Dan Sholly questioned the projected winter visitation figures. He felt that the plan was "somewhat generic," and did not have strong language on winter wildlife protection.⁶⁸ The *Winter Use Plan* offers little to suggest that Sholly's concerns were addressed. Indeed, in just three years actual Yellowstone winter visitation exceeded the authors' maximum projected

increase for the next *ten* years,⁶⁹ perhaps because the plan's authors relied upon data from other national parks rather than from Yellowstone itself in projecting the future trends in winter visitation.⁷⁰ Also, snowmobile air pollution exceeded the Clean Air Act limits at the West Entrance in 1995,⁷¹ despite the assertion of the authors that such would not happen.⁷²

Despite its shortcomings, the *Winter Use Plan* continues to guide the management of Yellowstone in winter. Barbee left Yellowstone in 1994 to assume the regional directorship of Alaska's national parks where, in the late 1990s, he and his staff wrote regulations banning snowmobiles from Denali National Park. As justification for this action, Barbee told me that "we don't want Denali to become another Yellowstone."⁷³

A Hard Look at the Problems: 1993–97

Mike Finley became superintendent of



Left: Bison on the road, 1997. By the early 1990s this view was becoming common in Yellowstone; bison using the hardpacked snowmobile roads for travel. This habit has raised concern about the effects of the park's winter program its wildlife. Below: Thousands of snowmobiles, 1997. By the mid-1990s, as many as 140,000 visitors passed through Yellowstone in winter, the majority on snowmobile. Over 75% of the visitors travel to Old Faithful during an average visit; as many as 2,000 snowmobiles will pass through that area per day. Photos by M. Jochim.



Yellowstone when Barbee left in 1994. Soon, Finley and his staff began renewed examination of the impacts of the winter use program.

In 1992-93, administrators in Grand Teton National Park (immediately south of Yellowstone) had opened their park's portion of the Continental Divide Snowmobile Trail, a 240-mile trail in Wyoming. That same winter, visitation in Yellowstone alone surpassed 140,000 persons. Both events tripped an important trigger specified by the 1990 *Winter Use Plan*: the implementation of the Visitor Use Management Planning Process (VUM),⁷⁴ which is "a process of identifying goals (or desired futures), looking at existing conditions, identifying discrepancies between the two, and laying out a plan of action to bring the two closer together."⁷⁵ The NPS began the VUM Process in Yellowstone in 1993 with Grand Teton and the surrounding national forests. In 1997, these agencies issued the *Winter Visitor Use Management: A Multi-Agency Assessment*, which was a preliminary summary of the issues and concerns related to snowmobile use in Yellowstone and the surrounding area. The document listed noise pollution, air pollution, and wildlife impacts as concerns raised by the public.⁷⁶ After analyzing more than 200,000 comments, the agencies expected to issue the final VUM report early in 1999. This document will recommend ways of improving the current situation, but any changes will be at the discretion of each land management agency.⁷⁷

While the federal agencies were busy with the VUM Process, nature intervened with an extraordinary winter in 1996-97, which saw more than 150 percent of normal snowfall in Yellowstone. Compounding the snow was a layer of ice that formed in the snowpack from some rain that fell after Christmas. The park's bison could not break through the ice to reach the grass below and began migrating out of the park (some via the snowmobile roads) in search of more easily obtainable food. Some of the park's bison carry brucellosis, a disease that, if transmitted to cattle, can cause an expectant cow to abort its fetus. To prevent that transmission, along with associated negative economic and political consequences, the

state of Montana shot or sent to slaughter most of the bison that left the park—a total of 1,084 by spring, 1997. This represented about a third of the park's herd, was the largest control of bison departing Yellowstone in history, and was one of the largest slaughters of bison anywhere since humans eliminated them from the Great Plains in 1884.⁷⁸

The bison killing led to a lawsuit against the NPS by the Fund for Animals, a wildlife advocacy group. Filed on May 20, 1997, the lawsuit contended that Yellowstone's winter use program was in violation of several laws, including the National Environmental Policy Act (NEPA), the Endangered Species Act, and the NPS Organic Act.⁷⁹ The NPS settled out of court with the Fund on September 23, 1997, by agreeing to both consider closing a snowmobile trail in order to evaluate the effects on overwintering bison in the park and also to write a new *Winter Use Plan/Environmental Impact Statement* (EIS).⁸⁰

In January, 1998, Yellowstone administrators announced that they would not close any snowmobile trails, but would institute several research projects to gather baseline data on bison use of groomed roadways. After three years, they would re-evaluate the need to close a road for research purposes.⁸¹ They began the EIS in April, 1998, and should complete it in 2000, if all proceeds as planned.

Conclusion

The history of snowmobiling in Yellowstone illustrates several concerns regarding the management of national parks. First, as with many issues, winter use evolved without much research and with little followup. Park managers were confronted with a new use and had to make a decision on whether or not to allow it without the time or ability to fully research the ramifications of it on Yellowstone. Moreover, they did not have policy direction from above in deciding whether that use was considered appropriate and traditional. Once made, their decision became institutionalized and hard to change. Making significant change in the program today would be difficult at best due to the complexity of the issue and number of economically dependent in-

terest groups.

The legal atmosphere and its effects on park management have changed considerably since Anderson's time. Anderson and his staff had little guidance in deciding to permit snowmobiles either from law or from national park service policy directives. Beginning with the passage of NEPA in 1970, the people of the United States gave increasing legislative guidance to federal land managers. Today's park managers have not only a suite of national environmental laws but also extensive policy direction from the NPS itself to follow and use.

The role of research in national park management has also changed. As Richard Sellars points out in *Preserving Nature in the National Parks* (1997), the NPS did not embrace peer-reviewed research until quite recently.⁸² Illustrating this fact in Yellowstone is the dearth of research on snowmobile effects upon the park dating from the 1970's. Today, the climate for research in the national parks is much more supportive and the NPS has many different on-going projects to assess the effects of its winter program upon the park. Still, much research needs to be done.

A decision that was arguably done to protect the park from becoming a busy winter thoroughfare has, in a way unforeseen to the park's managers, enabled its parkways to become even more crowded. The administrators of the 1960s and 1970s recognized that plowing park roads would encourage regional residents to drive through the park rather than around it. Restricting visitation to oversnow vehicles meant that only those who really wanted to see Yellowstone would enter. To encourage such appreciative visitation, administrators promoted the winter program in various ways. Their efforts to stimulate such visitation paid off so well that today's park managers find too many visitors and associated impacts at times. The modern NPS finds itself groping for ways to more adequately control the situation, and perhaps limit visitation.

The history of winter use in both Yellowstone and Glacier illustrates the high level of emotions attached to snowmobile use in national parks. At Glacier, park managers perceived that some concerns were too emotional to be settled by

objective research, and that some emotions should be used to direct management within the national parks. Managers in Yellowstone have seen consistent complaints from the public reflecting their concerns and emotions on winter use, and continue to struggle with them.

Ultimately, the story of snowmobile use in Yellowstone National Park may be a good illustration of how visitor preferences change over time. In the 1960s, Yellowstone's visitors seemed to prefer opening the park to access by snowmobile. Practically no opposition to this move occurs in the historical record until after snowmobile visitation was well established. Since then, opposition has been steady or increasing simultaneously with the growth of snowmobile use. Such changing user preferences are difficult for park managers to assess and monitor. As volatile as the preferences may be, it is difficult to predict where the park's winter use program will go in the future. One thing is certain though—the ride promises to be emotional and rocky. ❄

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Unless otherwise noted, all sources are in the Yellowstone National Park Library and Archives at Mammoth Hot Springs, Wyoming. Abbreviations used include: YNP: Yellowstone National Park; GNPA: Glacier National Park archives; POF: Planning Office files, YNP.

- 1 Michael J. Yochim, "The Development of Snowmobile Policy in YNP," Master's thesis submitted to the University of Montana, 1998, p. 98.
- 2 "Seek Year-Round Opening of Yellowstone Hiways," *Cody Enterprise*, Cody, Wyoming, March 17, 1948.
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- 12 John S. McLaughlin to Director, September 18, 1967, IN Box D-166, File D30: "Roads and Trails 1967—Winter Travel in Yellowstone."
- 13 Jack K. Anderson to All Division Heads, October 11, 1967, IN Box D-166, File D30: "Roads and Trails 1967—Winter Travel in Yellowstone." Evidently, Anderson assumed Yellowstone's superintendency from McLaughlin in late September or early October, 1967.
- 14 "Winter Oversnow Vehicle Operations" Minutes, IN Box L-42, File L3427: "Recreation Activities 1969—Winter Sports (Oversnow Vehicle Use)."
- 15 Anderson, "Interview with Jack Anderson, former Park Superintendent," interview by Robert Haraden and Alan Mebane, June 12, 1975, IN Drawer 3, Tape 75-3.
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- 17 Anderson, interview by Haraden and Mebane, June 12, 1975, IN Drawer 3, Tape 75-3.
- 18 Anderson to Raymond Euston, July 20, 1972, IN Box N-118, File "Historical Backcountry Correspondence."
- 19 Bob Jones (former Reservations Manager for YPCo.), Interview by author, telephone conversation, Moab, Utah, Nov. 17, 1997.
- 20 Staff Meeting Minutes for Feb. 2, 1971, IN Box A-37, File A40: "Conferences and Meetings, 1971," p. 3. While numerous other sources mention 1970 as the year road grooming began (such as Linda Paganelli, "The Historical Development of Winter Visitor Use at YNP," Vertical Files, 1980), this is the earliest mention that I could find of it. With 264 person days (53 weeks) of work listed as the number of days spent on grooming that winter, it is likely that the NPS began grooming in December, 1970.

- Since Paganelli does not cite her source, and because I can not find an original source with a 1970 date on it, I adhere to the February, 1971 date.
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 - 23 Bob Jones, interview by author, Nov. 17, 1997.
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 - 28 Summary Record of Snowmobile Use, YNP, 1966 through April, 1978, IN Box K-57, File "Winter Activities."
 - 29 Ibid.
 - 30 "Noise Facts and Acoustic Terms," from the "Current Stuff" Section of the *Snowmobile Briefing Book Vol. 1*, black binder in YNP Research Library.
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 - 32 Anderson to Paul McCrary, Midwest Region, December 2, 1969, IN Box L-42, File L3427: "Recreation Activities 1969—Winter Sports (Oversnow Vehicle Use)."
 - 33 Anderson to Director, April 15, 1971, IN Box L-36, File L3427: "Recreation Activities—Winter Sports."
 - 34 James E. Fox to West District Ranger, May 3, 1970, IN Box A-36, File L34: "Recreation Activities—1970."
 - 35 Anderson to Director, April 15, 1971, IN Box L-36, File L3427: "Recreation Activities—Winter Sports."
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 - 37 Bucknall to Chief Park Ranger, March 16, 1970, IN Box A36, File L34: "Recreation Activities, 1970."
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 - 40 Keith Aune, "Impact of Winter Recreationists on Wildlife in a Portion of YNP, Wyoming," Master's thesis, Montana State University, 1981, p. ix.
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