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GLEN CANYON ENVIRONMENTAL STUDIES OFFICE

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Part IV

Department of Transportation

Federal Aviation Administration

14 CFR Part 91, et al.

Special Flight Rules, Noise Limitations and Proposed Air Tour Routes in the Vicinity of Grand Canyon National Park; Final Rule, Proposed Rule and Notice

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Parts 91, 93, 121, and 135

[Docket No. 28537; Amendment Nos. 91-253, 93-73, 121-262, 135-66]

RIN 2120-AF93

Special Flight Rules in the Vicinity of Grand Canyon National Park

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: This final rule is one part of an overall strategy to further reduce the impact of aircraft noise on the park environment and to assist the National Park Service in achieving its statutory mandate, imposed by Public Law 100-91, to provide for the substantial restoration of natural quiet and experience in Grand Canyon National Park. This action is issued concurrently with: a Notice of Proposed Rulemaking regarding Noise Limitations for Aircraft Operations in the Vicinity of Grand Canyon National Park; a Notice of Availability of Proposed Commercial Air Tour Routes for Grand Canyon National Park and Request for Comments; and the Environmental Assessment issued with this final rule. This action amends part 93 of the Federal Aviation Regulations by adding a new subpart to codify the provisions of Special Federal Aviation Regulation No. 50-2, Special Flight Rules in the Vicinity of Grand Canyon National Park; modifies the dimensions of the Grand Canyon National Park Special Flight Rules Area; establishes new and modifies existing flight-free zones; establishes new and modifies existing flight corridors; and establishes reporting requirements for commercial sightseeing companies operating in the Special Flight Rules Area. In addition, to provide further protection for park resources, this final rule prohibits commercial sightseeing operations in the Zuni and Dragon corridors during certain time periods, and limits the number of aircraft that can be used for commercial sightseeing operations in the Grand Canyon National Park Special Flight Rules Area.

EFFECTIVE DATE: May 1, 1997.

FOR FURTHER INFORMATION CONTACT: Mr. Neil Saunders, Airspace and Rules Division, ATA-400, Office of Air Traffic Airspace Management, Federal Aviation Administration, 800 Independence Avenue, SW., Washington, DC 20591; Telephone: (202) 267-8783. For the Environmental Assessment contact Mr. William J. Marx, Manager, Environmental Programs Division, ATA-300, Office of Air Traffic Airspace Management, Federal Aviation Administration, 800 Independence Avenue, SW., Washington, DC 20591; Telephone: (202) 267-3075.

SUPPLEMENTARY INFORMATION:

History

Beginning in the summer of 1986, the FAA initiated regulatory action to address increasing air traffic over Grand Canyon National Park (GCNP). On March 26, 1987, the FAA issued Special Federal Aviation Regulation (SFAR) No. 50 (subsequently amended on June 15, 1987; 52 FR 22734) establishing flight regulations in the vicinity of the Grand Canyon. The purpose of the SFAR was to reduce the risk of midair collision, reduce the risk of terrain contact accidents below the rim level, and reduce the impact of aircraft noise on the park environment.

In 1987, Congress enacted Public Law (Pub. L.) 100-91, commonly known as the National Parks Overflights Act. Public Law 100-91 stated, in part, that noise associated with aircraft overflights at GCNP was causing "a significant adverse effect on the natural quiet and experience of the park and current aircraft operations at the Grand Canyon National Park have raised serious concerns regarding public safety, including concerns regarding the safety of park users."

Section 3 of Public Law 100-91 required the Department of the Interior (DOI) to submit to the FAA recommendations to protect resources in the Grand Canyon from adverse impacts associated with aircraft overflights. The law mandated that the recommendations: (1) Provide for substantial restoration of the natural quiet and experience of the park and protection of public health and safety from adverse effects associated with aircraft overflight; (2) with limited exceptions, prohibit the flight of aircraft below the rim of the canyon; and (3) designate flight-free zones except for purposes of administration and emergency operations.

In December 1987, the DOI transmitted its "Grand Canyon Aircraft Management Recommendation" to the FAA, which included both rulemaking and nonrulemaking actions. Public Law 100-91 required the FAA to prepare and issue a final plan for the management of air traffic above the Grand Canyon, implementing the recommendations of the DOI without change unless the FAA determined that executing the recommendations would adversely affect aviation safety. After the FAA determined that some of the DOI recommendations would adversely affect aviation safety, the recommendations were modified to resolve those concerns.

On May 27, 1988, the FAA issued SFAR No. 50-2 revising the procedures for operation of aircraft in the airspace above the Grand Canyon (53 FR 20264, June 2, 1988). SFAR No. 50-2 established a Special Flight Rules Area (SFRA) from the surface to 14,499 feet above mean sea level (MSL) in the area of the Grand Canyon. The SFAR prohibited flight below a certain altitude in each of five sectors of this area, with certain exceptions. The SFAR established four flight-free zones from the surface to 14,499 feet MSL covering large areas of the park. The SFAR provided for special routes for commercial sightseeing operators, which are required to conduct operations under part 135, as authorized by special operations specifications. Finally, the SFAR contained certain terrain avoidance and communications requirements for flights in the area.

A second major provision of section 3 of Public Law 100-91 required the DOI to submit a report to Congress "* * * discussing * * * whether [SFAR No. 50-2] has succeeded in substantially restoring the natural quiet in the park; and * * * such other matters, including possible revisions in the plan, as may be of interest. The report was to include comments by the FAA "regarding the effect of the plan's implementation on aircraft safety." Public Law 100-91 mandated a number of studies related to the effect of overflights on parks.

On September 12, 1994, the DOI submitted its final report and recommendations to Congress. This report, entitled, "Report on Effects of Aircraft Overflights on the National Park System" (Report to Congress), was published in July 1995. The Report to Congress recommended numerous revisions to SFAR No. 50-2 in order to substantially restore natural quiet in GCNP. Recommendation No. 10, which is of particular interest to this rulemaking, states: "Improve SFAR 50-2 to Effect and Maintain the Substantial Restoration of Natural Quiet at Grand Canyon National Park." This recommendation incorporated the following general concepts: Simplification of the commercial sightseeing route structure; expansion of flight-free zones; accommodation of the forecast growth in the air tour industry; phased-in use of quieter aircraft technology; temporal restrictions ("flight-free" time periods); use of the full range of methods and tools for

problem solving; and institution of changes in approaches to park management, including the establishment of an acoustic monitoring program by the National Park Service (NPS) in coordination with the FAA.

On June 15, 1995, the FAA published a final rule that extended the provisions of SFAR No. 50–2 to June 15, 1997 (60 FR 31608). This action allowed the FAA sufficient time to review the NPS recommendations and to initiate and complete appropriate rulemaking action.

Interagency Working Group

On December 22, 1993, Secretary of Transportation Federico Peña and Secretary of the Interior Bruce Babbitt formed an interagency working group (IWG) to explore ways to limit or reduce the impacts from overflights on national parks, including GCNP. Secretary Babbitt and Secretary Peña concurred that increased flight operations at GCNP and other national parks have significantly diminished the national park experience for some park visitors, and that measures can and should be taken to preserve a quality park experience for visitors, while providing access to the airspace over national parks. The FAA has been working closely with the NPS to identify and deal with the impacts of aviation on parks, and the two agencies will continue to identify and pursue the most effective solutions.

The FAA's role in the IWG has been to promote, develop, and foster aviation safety, and to provide for the safe and efficient use of airspace, while recognizing the need to preserve, protect, and enhance the environment by minimizing the adverse effects of aviation on the environment. The NPS' role in the IWG has been to protect public land resources in national parks, preserve environmental values of those areas, including wilderness areas, and provide for public enjoyment of those areas.

In March 1994, the two agencies jointly issued an advance notice of proposed rulemaking (ANPRM) seeking public comment on policy recommendations addressing the effects of aircraft overflights on national parks, including GCNP (59 FR 12740; March 17, 1994). The recommendations presented for comment included voluntary measures, altitude restrictions, flight-free periods, flight-free zones, allocation of noise equivalencies, and incentives to encourage use of quiet aircraft technology. In response to the ANPRM, the FAA received 644 comments that specifically addressed GCNP. These comments were summarized in the NPRM published on July 31, 1996 (61 FR 40120; Notice 96–11).

President's Memorandum

The President, on April 22, 1996, issued a Memorandum for the Heads of Executive Departments and Agencies to address the significant impacts on visitor experience in national parks. Specifically, the President directed the Secretary of Transportation to issue proposed regulations for GCNP that would place appropriate limits on sightseeing aircraft to reduce the noise immediately and make further substantial progress towards restoration of natural quiet, as defined by the Secretary of the Interior, while maintaining aviation safety in accordance with Public Law 100–91.

Notice of Proposed Rulemaking Draft Environmental Assessment

On July 31, 1996 the FAA published an NPRM (61 FR 40120; Notice 96–11), to reduce the impact of aircraft noise on GCNP and to assist the NPS in achieving its statutory mandate imposed by Public Law 100–91 to provide for the substantial restoration of natural quiet and experience in GCNP. Notice 96–11 proposed the following: Codification and amendment to the SFAR 50–2, Special Flight Rules in the Vicinity of GCNP; modification of the dimensions of the Grand Canyon National Park Special Flight Rules Area; establishment of new flight-free zones and flight corridors, as well as modification of existing flight-free zones and flight corridors; establishment of flight-free periods (curfews) and/or an interim moratorium on additional commercial sightseeing air tours or tour operators (caps); and establishment of reporting requirements for commercial sightseeing companies operating in the SFRA. In addition to these areas, the FAA sought comment on a number of questions and alternatives regarding curfews and caps, as well as on the issue of quiet aircraft technology. The comment period for the proposed rule, originally set for 60 days, was subsequently extended for 45 days (61 FR 54716; October 21, 1996) as directed by the Congress in the Federal Aviation Authorization Act of 1996.

On August 21, 1996, the notice of availability of the draft Environmental Assessment (EA) was published in the **Federal Register** (61 FR 43196). Comments on the draft EA were to be received on or before October 4, 1996. This date was subsequently extended, as directed by Congress in the Federal Aviation Authorization Act of 1996, to November 18, 1996.

Comments received in response to this Notice of Availability of the draft EA have been addressed in the final EA published concurrently with this final rule.

Public Meetings

On September 16–20, 1996, in Scottsdale, AZ, and Las Vegas, NV, the FAA held public meetings to obtain additional comment on the Notice 96–11 and on the draft environmental assessment. Comments and the transcripts of these meetings have been placed in the rulemaking docket.

The following information summarizes what occurred at the public meetings on the Grand Canyon NPRM and draft EA, held in Scottsdale, Arizona, September 16 and 17, 1996, and Las Vegas, Nevada, September 19 and 20, 1996.

Senator Reid of Nevada, by proxy in Las Vegas, noted his opposition to the proposed rule. He indicated that 44 percent of the Canyon was already covered by flight-free zones, and that only 14 percent of park airspace is available to the operators now. He also opined that (1) the requirements of Public Law 100–91 (i.e., substantial restoration of natural quiet) have been accomplished by the SFAR; and (2) the new rule would have major adverse impacts on safety and economics. He foresaw devastating financial impacts on the air tour industry and on local communities. Congresswoman Vucanovich of Nevada, also by proxy in Las Vegas, indicated that she was concerned about the effects of the proposed rule on the air tour industry, noting that there were no flight routes specified in Notice 96–11. She believed that flight-free periods/curfews would raise both economic and safety issues. She also believed that an Environmental Impact Statement (EIS), as opposed to an EA, was required under the National Environmental Policy Act (NEPA) based on the highly controversial nature of the NPRM.

The air tour operators talked about potential adverse economic impacts of the NPRM, potential negative impacts on safety—such as compressing more flights into the smaller areas as the result of curfews and additional flight-free zones—and the importance of quiet aircraft technology, and incentives to manufacture and use quieter aircraft, noting specifically that quieter aircraft are far more expensive to purchase and operate than are noisier aircraft. A number of operators emphasized their belief that "SFAR 50–2 works," both from safety and environmental standpoints. Many of these same operators questioned the NPS's

definitions of natural quiet and substantial restoration thereof, and challenged the science involved, including noise modeling conducted by both FAA and NPS, in measuring the noise impacts of commercial air tour overflights and in assessing the degree to which natural quiet has been restored under SFAR 50–2. Several operators and representatives of aircraft manufacturers offered concrete suggestions as to the kinds of incentives that might prove useful.

As for other aviation interests, general aviation groups expressed concerns about their constituents' ability to transit the park safely and conveniently.

Representatives of environmental groups and individual environmentalists pointed out that the addition of two flight-free zones is misleading, in that aircraft noise can travel from 13–16 miles laterally, so the flight-free zones are not free of noise. A number of environmentalists indicated that the NPS's definition of substantial restoration of natural quiet is too liberal and allows too much aircraft noise. They also pointed out that, in contrast to the lack of control on air tour overflight volume, there are tight controls on all commercial activities on the ground in parks. Environmentalists spoke favorably about the promise of quieter aircraft technology and supported the development of incentives to manufacture and use quieter aircraft.

Representatives of Native American tribes living in and around the Grand Canyon expressed major disappointment with what they viewed as the failure by the FAA and NPS to consult with them adequately on the NPRM and the draft EA. They emphasized that the net effect of the revised rule would be to relocate noise impacts from the park to tribal lands, with concomitant adverse effects on their natural and cultural resources and on the health and safety of tribe members and visitors to tribal lands. They believed that the situation called for an EIS, not an EA.

While the FAA held separate meetings in both Scottsdale, AZ, and Las Vegas, NV, on the NPRM and the EA, a number of commenters at the NPRM meetings addressed the EA as well, and vice versa. The majority of comments from all "sides" of the issue were negative with regard to the EA itself, which many found inadequate for a variety of reasons, including the fact that the range of alternatives was limited to either no action or the proposed alternative, and an overall lack of specificity. Several commenters pointed to inconsistencies between FAA and NPS noise modeling methodologies, which led the agencies to two different conclusions as to the potential effectiveness of the revised rule. Air tour operators pointed out that the potential adverse impacts of the NPRM on their operations, including safety concerns, were not justified in view of FAA's findings that the proposed alternative would not provide any significant improvement in natural quiet, while environmentalists argued that the EA failed to include any alternative which would substantially restore natural quiet to the park. More than a few commenters felt that NEPA compliance in this case required an EIS, not an EA.

One of the few areas of common ground to emerge from these meetings was widespread support for further use of quieter aircraft technology and for the development and implementation of incentives to manufacture and use quieter aircraft.

Congressional Hearings

From October 10 to 11, 1996, Congressional hearings were held by the Aviation Subcommittee of the Senate Committee on Commerce, Science, and Transportation in Las Vegas, Nevada, and Tempe, Arizona. The hearings were held to gather testimony from various entities involved in or affected by the FAA's proposed Special Flight Rules in the Vicinity of Grand Canyon National Park. Senator McCain of Arizona chaired and made opening statements at both field hearings indicating that they were there to examine the impacts of the proposed rule and the draft environmental assessment. He expressed his disappointment in the lack of mention of quiet aircraft technology in Notice 96–11, indicating that he hoped FAA would provide appropriate incentives in the final rule.

The Nevada Congressional delegation (Senator Bryan and Congressman Ensign in person, Senator Reid and Congresswoman Vucanovich by proxy) indicated, at the Las Vegas hearing, their opposition to Notice 96–11 as written, noting safety concerns as well as ones related to economics, NEPA compliance, and the lack of quiet aircraft technology incentives.

The issues raised by Senator McCain and the Arizona delegation were also addressed by others testifying at the field hearings. There were points and counterpoints raised as to the effectiveness of SFAR 50–2 in substantially restoring natural quiet in the Grand Canyon, as mandated by Public Law 100–91; NPS's definition of substantial restoration (50 percent or more of the park quiet at least 75–100 percent of the day); methodology involved in measuring and modeling noise impacts; potential impacts of the new rule on safety in the SFRA; effects of the new rule on general aviation; potential adverse impacts of the rule on the economy of Las Vegas and Nevada; adequacy of the consultation process with Native American tribes; and controls on other users of the park vis-à-vis air tour overflights.

Many of the air tour operators, some of whom had also voiced concerns about the safety implications of Notice 96–11, predicted dire economic consequences for the industry if the NPRM, which included possible caps on operations, curfews, and two additional flight-free zones, went into effect. In response to the operators' economic concerns, Senator McCain reminded them that they had unanimously opposed his bill, which became Public Law 100–91, in 1987, claiming that it would put the entire industry out of business. Instead, he noted, the number of air tour overflights of Grand Canyon had increased from approximately 40,000 per annum in 1987 to the 95,000 reported by the Arizona Republic newspaper during the 12-month period which ended September 30, 1996.

Aside from a commitment to air safety, perhaps the only issue on which all of the interests represented at the field hearings could agree was the need for quiet aircraft technology incentives for both manufacturers and air tour operators. From Senator McCain and members of the Nevada Congressional delegation to the Native American Indian tribal leaders and from environmental groups to air tour operators and aircraft manufacturers, as well as aviation and tourism industry representatives, quieter aircraft technology incentives were viewed as integral to efforts to substantially restore natural quiet to the Grand Canyon while maintaining a viable air tour industry. Among specific suggestions made were providing more attractive routes to quieter aircraft, setting aside a portion of air tour overflight fees to provide loans to air tour operators to invest in further quiet aircraft technology, and lowering fees for those operators using quieter aircraft.

The FAA has considered the statements made at the hearings in developing this final rule and the Notice of Proposed Rulemaking regarding Noise Limitations for Aircraft Operations in the Vicinity of the Grand Canyon National Park found in this part of today's **Federal Register**.

Consultation with Affected Native American Tribes

The Navajo, Hualapai, and Havasupai Native American reservations border GCNP, and several other tribes have cultural ties to the Grand Canyon. The DOT and DOI have satisfied their obligation to consult with these tribes, on a government-to-government basis concerning the possible effects of this rule, as required under applicable statutes, regulations, and Executive Orders. Although they did not elect to do so, the tribes were invited to participate as cooperating agencies in the environmental review process. Their major concerns were recognition of their sovereignty over the airspace, air access, potential noise increases over tribal lands and religious/historic/cultural sites, and the lack of early coordination during the development of the proposed rule. Both DOT and DOI have addressed tribal concerns, including the effects of the rule on economic opportunities of the tribes, in preparing this final rule. The consultation process, and the mitigation commitments made to address tribal concerns, are described in detail in the final EA, a copy of which has been included in the docket for the final rule.

The consultation process, which began with the development of Notice 96–11, for reduction of aircraft noise, will continue. This will include a dialogue in which potentially affected tribes will have the opportunity to identify, on a confidential basis, any religious, cultural, or historic area that may be potentially affected by significant noise increases. The FAA has committed to mitigate any such impacts during the development of air tour routes for GCNP.

Public Input

As previously mentioned, on July 31, 1996, the FAA published Notice 96–11 in the **Federal Register** proposing several actions to reduce the impact of aircraft noise on GCNP and assist the NPS in its efforts to substantially restore natural quiet and experience in the park. Interested persons were invited to participate in this rulemaking action by submitting written data, views, or arguments. In response to this notice, the FAA received approximately 14,000 comments. Almost 95 percent of these comments were form letters, or virtual form letters, stating a position either favoring restrictions on air tour overflights or opposing them, with no substantive discussion. While all comments received were considered before issuing this final rule, the specific comments addressed in this preamble are those that contained substantive information.

The following is an analysis of the pertinent general comments received in response to Notice 96–11. Later in the document the FAA has included a section-by-section analysis of the rule, including a discussion of the relevant comments related to each of these sections, and rationale of the final rule.

Discussion of Pertinent General Comments

Comments were received from industry associations (e.g., Grand Canyon Air Tour Council, United States Air Tour Association, Aircraft Owners and Pilots Association, Helicopter Association International); environmental groups (e.g., Sierra Club, National Parks and Conservation Association); air tour operators; aircraft manufacturers; government officials; and Native American tribes (e.g., Havasupai Tribe, Hualapai Tribe).

Approximately one-third of the comments support overflight restrictions to reduce aircraft noise over GCNP. Many of these commenters say that, even with the current SFAR, the noise problem has worsened as the air tour industry has grown. These commenters want to see the proposal strengthened to preserve the natural quiet of the park and recommend permanent caps on the number of air tour flights (based on the number of flights in 1987 when Public Law 100–91 was passed); expansion of the flight-free zones; stricter curfews; and incentives for the use of quiet aircraft (combined with caps and curfews).

Approximately two-thirds of the comments oppose further overflight restrictions. These commenters argue that SFAR 50–2 has been successful in reducing noise (as shown by visitor surveys); air tour operations allow everyone access to the park and have less environmental impact on the park than do ground visitors; the proposed flight corridors and flight-free zones could create safety problems by causing denser traffic patterns; and the air tour industry would face severe economic consequences.

Statutory Authorities

A few commenters state that Notice 96–11 is basically allowing the NPS to regulate the airspace over the national parks, thereby diluting the authority of the FAA. Others state that the FAA has no authority to regulate noise over the national parks, that the FA Act (now codified in 49 U.S.C.) authorizes the FAA to regulate safety, and to regulate noise only as it concerns aircraft certification.

Several commenters focus on the authority provided in Public Law 100–91. Some of these commenters do not believe that Public Law 100–91 gives the FAA the authority to do more than it has already done in issuing SFAR 50–2. One commenter states that since Public Law 100–91 requires NPS to submit its report on the effectiveness of the airspace management plan to Congress, only Congress was intended to review the NPS recommendations and provide specific guidance on what further agency action, if any, would be appropriate.

A presenter at the Congressional hearing, as well as an individual from the Navajo Area Office of the BIA commenting to the docket, adds that Public Law 102–581 (The Airport and Airway Safety, Capacity, Noise Improvement Transportation Act of 1992) (also related to aircraft noise at the Grand Canyon), called for a report to Congress outlining the FAA's plan to manage increased air traffic over GCNP. As in Public Law 100–91, this report would be used only by Congress for any further action. Another commenter states that the FAA and NPS have done only half of the task mandated under Public Law 100–91 since they have not yet proposed the air tour routes that will be followed. An air tour operator comments that the proposal does not comply with Public Law 100–91 because the statute requires an overflight system that will substantially protect the ground visitor from aircraft noise, while the proposal is based on a standard called percent time audible.

One commenter believes that the FAA has violated the Administrative Procedure Act by not providing a reasonable opportunity for public comment on the meanings of the terms "natural quiet" and "substantial restoration of natural quiet."

Two commenters state that the proposal violates the Americans with Disabilities Act and provisions of the FA Act that guarantee air access to elderly and disabled persons. Counter to these commenters, another commenter states that most handicapped visitors see the park from the rim overlooks and paved rim trails and that such visitors should not be an excuse for the park's inability to achieve its Congressional mandated goal of substantial restoration of natural quiet.

FAA Response: The FAA has broad authority and responsibility to regulate the operation of aircraft and the use of the navigable airspace and to establish safety standards for and regulate the certification of airmen, aircraft, and air carriers. 49 U.S.C. 40101, *et seq.* Subtitle VII of Title 49 U.S.C. provides guidance

to the Administrator in carrying out this responsibility. Moreover, the FAA's authority is not limited to regulation for aviation safety and efficiency.

The FAA has authority to manage the navigable airspace to protect persons and property on the ground. The Administrator is authorized to "prescribe air traffic regulations on the flight of aircraft (including regulations on safe altitudes) for— * * * (B) protecting individuals and property on the ground." 49 U.S.C. 40103(b)(2). In addition, under 49 U.S.C. 44715(a) the Administrator of the FAA, in consultation with the Environmental Protection Agency, is directed to issue such regulations as the FAA may find necessary to control and abate aircraft noise and sonic boom to "relieve and protect the public health and welfare."

The FAA construes these provisions, taken together, to authorize the adoption of this regulation. It is the general policy of the Federal Government that the FAA, like other agencies, will exercise its authority in a manner that will enhance the environment. Section 101 of the National Environmental Policy Act of 1969, as amended 42 U.S.C. 4321 and Executive Order 11514, as amended by Executive Order 11991.

The unambiguous intent of Public Law 100–91 with respect to the Grand Canyon was for the FAA to work cooperatively with the NPS to devise a plan that would safely provide for a substantial restoration of natural quiet while maintaining a viable air tour industry. For this reason Sections 3(b)(3) (A) and (B) provided for an evaluation of the initial plan and any necessary revisions based upon that evaluation. Because the report recommended regulatory action rather than legislative action, the FAA was not constrained to wait for Congressional response. For GCNP, the law specifically addressed the substantial restoration of natural quiet, not the protection of ground visitors.

Public Law 102–581 required the FAA to submit to Congress a report on increased air traffic over GCNP. This report, like the report required to be submitted by Public Law 100–91, did not limit the ability of the FAA to use its general regulatory authority to take appropriate actions in implementing provisions of either report. Indeed, Public Law 102–581 specifically requires a plan of action to "manage increased air traffic over Grand Canyon National Park to ensure aviation safety and to meet the requirements established by such Section 3 of the Act of August 18, 1987, including any measures to encourage or require the use of quiet aircraft technology by commercial air tour operators." Public Law 102–581, Section 134(b)(4).

Both the FAA and NPS recognize that additional work will be necessary in delineation of air tour routes to be followed as well as other actions. In consultation with the NPS, FAA has proposed air tour routes in a separate notice issued concurrently with this final rule. Additionally, in a separate Notice of Proposed Rule Making issued today, further actions to facilitate the substantial restoration of natural quiet to the Grand Canyon have been proposed. Both this final rule and the NPRM acknowledge the need for the development of a Noise Management Plan to further mitigate impacts from commercial overflights. These actions are also taken in full recognition that the restoration of natural quiet to the Canyon will require these additional steps to meet the definitions established for natural quiet. The rationale for the establishment of the percent time audible is included in the NPS report to Congress. While this methodology may differ from some measurements, it assures protection of the ground visitor from aircraft noise. Furthermore, the threshold of audibility used in the NPS model is louder than the level which would be detected by an attentive listener, guaranteeing that virtually all visitors would notice the noise while engaged in normal visitor activities.

The terms "natural quiet" and "substantial restoration of natural quiet" are taken from language in Public Law 100–91. These terms were defined in the Report to Congress issued by the NPS under the direction of that Act. That report has been available to the public and its role in the development of this regulatory proposal has been clearly defined in previous notices, including the ANPRM on this rule. The concepts of "natural quiet" and "substantial restoration of natural quiet" have been the subject of academic research, agency disclosure and adversarial dialogue for a number of years and are used as recognized technical benchmarks in the analysis of the effects of this rule. As such, the terms do not need additional comment under the Administrative Procedure Act.

In addition, the Grand Canyon Enlargement Act specifically provides that the Department of Interior shall submit to the FAA and EPA pursuant to 49 U.S.C. 44715 any recommendations for rules or regulations or other actions he believes appropriate to protect the public health, welfare, and safety or natural environment within the park. After reviewing the submission of the Secretary, the FAA is to take appropriate action.

This action does not violate provisions of the Americans with Disabilities Act or any other guarantees of air access to elderly or disabled persons. The disabled and the elderly will still have a variety of opportunities to view the Grand Canyon by air. In addition, opportunities for ground visits to GCNP will also be as available as they are at present. Provisions for ground access include issuance of special permits to the elderly and handicapped for access to areas closed to automobiles at certain times of the year. Visitor facilities within the park, including overnight accommodations, restaurants and developments are accessible to the handicapped and the elderly.

Impact on Tribal Lands

An individual from a local office of the Bureau of Indian Affairs (BIA) and representatives of Native American tribes affected by this rulemaking state that the FAA and NPS have violated certain treaties, statutes, and Executive Orders by not consulting with the affected tribes during the development of Notice 96–11 and by not analyzing the impact the proposed rule would have on these tribes and their lands.

FAA Response: The FAA disagrees that treaties, statutes, and executive orders have been violated by not consulting with affected Native American tribes. Public involvement is an important part of the rulemaking process. Public hearing activities have included public meetings with interested parties and consultation with Native Americans. The FAA has not yet received concurrence from the Arizona Historic Preservation Officer and the Tribal Historic Preservation Office for the Hualapai Tribe in a determination of no adverse effect pursuant to Section 106. The FAA will continue to consult and work with Native American Nations and Tribes during development of the air tour routes to address any requested measures to minimize noise increases over specifically identified traditional cultural sites as part of the Section 106 process. This includes areas potentially affected by traffic and air tour routes outside the Flight Free Zones.

An initial determination of no adverse effect by the FAA was based upon an analysis of cultural resources in the vicinity of the GCNP as identified by the NPS and knowledge shared by Native American tribes with comtemporary and ancestral involvement with the Grand Canyon. Native Americans tribes may have been reluctant to identify the locations of other specific sites of concern due to a desire to limit public access and preserve their sacred character and integrity. The FAA

commits to preserve the confidentiality of the locations of any specifically identified traditional cultural sites that the Native Americans elect to disclose to the FAA during consultation to establish the air tour routes. The FAA further commits to complete Section 106 consultation before it finalizes and permanently implements the air tour routes and to adopt all measures necessary to support a determination of no adverse effect. The FAA will also adopt all measures necessary to assure that the routes developed to implement the proposed final rule do not substantially interfere with the use of sacred religious sites of the Native American tribes in the vicinity of the GCNP.

As discussed in detail in Chapter 4.2 of the Environmental Assessment (EA), the FAA will continue to consult and work with Native American Tribes pursuant to Section 106, during development of the air tour routes to address any requested measures to minimize noise increases over traditional cultural properties as part of the Section 106 process. This includes areas potentially affected by traffic and air tour routes outside the Flight Free Zones; like the 10–12 miles radius around the confluence of the Little Colorado and Colorado Rivers that was identified by the Hopi Tribe.

The FAA will protect any confidentiality requested to limit public access and preserve the character and integrity of sacred sites. The FAA will complete Section 106 consultation before it finalizes and permanently implements the air tour routes and will adopt all measures necessary to support a determination of no adverse effect. The FAA will also adopt all measures necessary to assure that the routes developed to implement the proposed final rule do not substantially interfere with the religious practices of the Native American tribes.

On June 28, 1995, the FAA and NPS jointly published a notice announcing a public meeting to provide the interested parties with an opportunity to comment on improving SFAR 50–2 (60 FR 33452). The meeting, held on August 30, 1995, yielded 62 speakers representing air tour operators, environmentalists, government, tourist boards, corporations, Native American tribes, and other individuals. An additional 349 public comments were subsequently received during the comment period that ended on September 8, 1995.

The FAA sponsored public meetings, in Scottsdale, Arizona, on September 16 and Las Vegas, Nevada, on September 19, 1996, to receive comments on the NPRM. These meetings were announced in the **Federal Register** on August 30 (61 FR 45921) and in newspapers in Phoenix, Flagstaff, and Kingman, Arizona, and Las Vegas, Nevada, on several dates in early September.

On August 27 and 28, 1996, the FAA hosted a meeting in Flagstaff, Arizona, at which tribal representatives were given the opportunity to express their views on the rule. FAA invited two representatives each from the Hualapai, Havasupai, Hopi, San Juan Southern Paiute, Paiute of Utah, and Kaibab Piaute Tribes, the Pueblo of Zuni, and the Navajo Nation. During the meetings, the Native American representatives were given a detailed briefing by the FAA on changes proposed in the NPRM. Following the briefing, there was a question-and-answer session where FAA and NPS representatives fielded questions on the revised rule. Minutes of the meeting were provided to each tribe that was invited.

Subsequently, from October 14 to 21, 1996, representatives of the FAA met on-site in Arizona, New Mexico, and Utah with representatives of each tribe to further assess the concerns of the Native Americans. Each tribe was offered a briefing on the proposed rule and given the opportunity to ask questions of the FAA representatives.

Other opportunities have been provided for the tribes to make their views known to the DOT. The Hualapai Tribe submitted comments to the Advance Notice for Proposed Rulemaking (ANPRM) jointly issued by the DOT and DOI. One member of the Hualapai Tribe spoke at the Flagstaff public meeting, and the Hualapai Tribe submitted written comments in response to the public meeting. The Hualapai Tribe commented on the need for a socio-economic analysis of the proposed flight restrictions on the Hualapai Nation. The Chairman of the Hualapai Tribe spoke at the Las Vegas public meeting. Written comments have been received into the docket from the Hualapai, Hopi, and Havasupai Tribes.

Additionally, informal discussions covering aircraft overflight matters, among other issues, have taken place between NPS personnel and tribal leaders locally. The DOT and the DOI have received correspondence identifying interests of the Hualapai Tribe, and the DOT and the FAA met with Hualapai leaders on several occasions and heard first hand many of their specific concerns.

Special Federal Aviation Regulation No. 50–2

Several commenters believe that SFAR 50–2 is working and further regulation is not necessary. According to these commenters complaints about noise have been practically eliminated and no accidents have occurred since the SFAR's implementation. Environmentalist groups, however, state that while SFAR 50–2 has improved natural quiet in the front country, erosion of natural quiet is occurring in the backcountry. According to these commenters, Notice 96–11 does not bring GCNP into compliance with Public Law 100–91.

FAA Response: Notwithstanding the value of SFAR 50–2, this regulatory action responds to a clear legislative mandate to substantially restore natural quiet, expressed in Public Law 100–91. As discussed in Notice 96–11, the NPS Report to Congress was based on a number of studies evaluating whether SFAR 50–2 resulted in a substantial restoration of natural quiet. NPS found that, while flight-free zones have helped to limit the areas where aircraft are audible, aircraft of all types are still audible for some percentage of the time at virtually all areas where sound data were collected. NPS also found a correlation between the percentage of time that aircraft are audible and how visitors feel about aircraft sound. Even when aircraft are audible for relatively low percentages of the time, some visitors notice the aircraft and believe that the sound has interfered with their appreciation of natural quiet. Finally, in its Report to Congress, the NPS indicated that if no changes are made to SFAR 50–2, progress to date in the restoration of natural quiet will be lost due to an increase in air tour operations. An NPS analysis using 1989 FAA survey data of commercial sightseeing route activity indicated that 43 percent of GCNP met the NPS criterion for substantially restoring natural quiet. However, a subsequent NPS analysis using 1995 FAA survey data indicated that 31 percent of GCNP met the NPS criterion for substantially restoring natural quiet. These findings led the NPS to conclude that the noise mitigation benefits of SFAR 50–2 are being significantly eroded.

These findings indicate that the current SFAR was not sufficiently adequate in substantially restoring the natural quiet to GCNP. The FAA believes that further regulatory action is therefore necessary to best ensure the substantial restoration of the natural quiet as called for by Public Law 100–91. Additionally, substantial restoration of natural quiet will be further advanced by the NPRM and Notice of Availability of Proposed Commercial Air Tour Routes for Grand Canyon National Park

and the Comprehensive Noise Management Plan.

Restoration of Natural Quiet

While some commenters are concerned that the proposed action goes too far in regulating the air tour industry in order to satisfy a small group of park users, others believe that it does not go far enough. Some commenters state that the proposal, at best, would only modestly improve natural quiet. Other comments are concerned that "overregulation" in this instance would set a precedent for national parks all over the country.

Another commenter states that the proposal would not achieve the goal of Public Law 100–91 because it would not meet the NPS definition of "natural quiet." According to some commenters the NPS definition of "substantial restoration of natural quiet" is not supported by Public Law 100–91 or the Congressional record. According to these commenters NPS has separated the concept of "natural quiet" from complaints from park visitors by making "natural quiet" a park resource that must be protected whether noise is disturbing park visitors or not. These commenters object to the NPS definition and to using it as a justification for rulemaking. One commenter states that the FAA is on record as having concerns about the NPS definition and recommends withdrawal of Notice 96–11 until the FAA develops a proposed definition and invites comment.

One commenter finds the NPS definition too liberal since it allows half the park to be noisy 25 percent of the day and the other half 100 percent of the day. A presenter at the Congressional hearing says that the intent of Public Law 100–91 was to restore the natural quiet within the flight-free zones only and not the entire park.

The Grand Canyon Air Tour Council (GCATC), which represents a number of air tour operators, states that, because the proposed restrictions do not apply to NPS-operated and other non-tour aircraft (e.g., military, Native American reservations), these aircraft could consume the entire 25 percent audible aircraft cap as defined in "substantial restoration of natural quiet." Thus, air tour operators would be even further restricted.

FAA Response: The NPS defined "natural quiet" and identified it as a natural resource in its 1986 "Aircraft Management Plan Environmental Assessment for Grand Canyon National Park" which underwent extensive public review in 1986 (i.e., "the absence of man-made sounds * * * considered a natural resource"). The term was subsequently discussed in numerous public documents, which have also undergone public review, including NPS Management Policies (1988), and the Advance Notice of Proposed Rulemaking (ANPRM) concerning Overflights of Units of the National Park System published in the **Federal Register** on March 17, 1994.

The authority of the NPS to define the "substantial restoration of natural quiet" is recognized in Public Law 100–91, Public Law 102–581, and in the general authorities of the NPS. The NPS's Management Policies (1988, page 1:3) states that the terms "park resources and values" refer to the "full spectrum of tangible and intangible attributes", including "intangible qualities" such as natural quiet, for which parks have been established and are being managed. National park areas are set aside to preserve their resources as well as their special qualities and experiences unimpaired for the enjoyment of present and future generations. The NPS has the authority and responsibility to manage these areas, including their resources, values and visitors.

The NPS definition of "substantial restoration of natural quiet" involves time, area, and acoustic components. Because many park visitors typically spend limited time in particular sound environments during specific park visits, the amount of aircraft noise present during those specific time periods can have great implications for the visitor's opportunity to experience natural quiet in those particular times and spaces. Those visitors with longer exposures, such as backcountry and river users, have more opportunity to experience a greater variety of natural ambient and aircraft sound conditions, but typically they move through a number of sound environments. Based on its studies, the NPS concluded that the visitors' opportunity to experience natural quiet during their visits and the extent of noise impact depends on a number of factors. These factors include the number of flights, the sound levels of those aircraft, as well as other sound sources at the natural sound environment, and the duration (or amount of time) during that visit that aircraft were audible in specific locations. Integrated measures of noise (such as DNL and L_{eq}) are commonly used to quantify time varying noises such as are described above. Most of the FAA's experience has been in assessing noise impacts in airport and residential environments where people are exposed to a variety of sound conditions in the same basic sound environment over a very long period of time. However, because park environments and the set of conditions typically experienced by park visitors is completely different, the NPS concluded that these integrated measures were, by themselves, inadequate to represent the effect of overflights on park environments and a person's visit. However, the FAA and the NPS agree that L_{eq} integrated over a short time period correlates with park visits and can be useful in assessing park noise impacts.

This action only considers the air tour contribution to the GCNP noise. In other words, noise contributed from other sources is treated separately for purposes of noise modeling analysis.

The NPS will continue to strictly control its rescue, law enforcement, maintenance and critical resource management overflights to minimize their number and effect on park resources and visitors. These flights are made for lifesaving and essential management purposes and will not be a factor in any restrictions on air tour operations.

Discrimination Against Air Tourists vs. Other Users

A number of commenters state that SFAR 50–2 and Notice 96–11 discriminate against air tour visitors to the park, who have little environmental impact on the park, while ignoring the noise, litter, and pollution problems associated with ground users. A few commenters believe that NPS is purposely trying to eliminate air tours from the park. Other commenters point out that air tour visitors are not being discriminated against since all commercial enterprises that use the Grand Canyon are restricted.

FAA Response: The FAA does not agree. The actions by the FAA in addressing mitigation measures associated with noise from commercial air tour operations is additive to actions being taken by the NPS to preserve and protect for future generations the resources of GCNP. Recent actions include the development of a General Management Plan which will greatly restrict automobile use in congested rim areas, provide high occupancy public transit, and establish pedestrian and bicycle trails. Other actions have included restrictions on the operation of diesel buses, on diesel and steam locomotives serving the park, and on outboard engines on river rafts. In addition, the NPS has a long standing administrative practice in the control and mitigation of impacts to resources resulting from visitation through the use of reservation systems for campgrounds and other sites both on the rim and in the inner canyon, as well as providing for times when use types are restricted,

such as the "oar only" season for rafting on the Colorado River. As such, use allocation is a common practice within NPS areas in order to meet the demands of the general provisions of acts relating to the administration of National Park Service Areas (16 U.S.C. 1 *et seq.*) as well as specific park legislation such as Public Law 100–91.

Further, it was not the intent of Public Law 100–91 to ban aircraft from overflying the Grand Canyon. In this regard, the FAA believes that viewing of the canyon from the air is a legitimate and valuable means of appreciating the beauty of the Grand Canyon. This policy is supported by the legislative history of Public Law 100–91 and the objectives states by DOI in its December 1987 recommendations to the FAA. The agency further believes that the resources of the canyon can be protected without an exclusion of aircraft, which would have a major adverse impact on air travel through this area of the southwest. It is the intent of the rule adopted to permit the continuation of aerial viewing of the canyon, and air travel through the area, in a manner consistent with the stated purposes of section 3 of Public Law 100–91 to substantially restore the natural quiet of the Grand Canyon within the boundaries of the national park.

The NPS has had a consistent position for years regarding air tours at the Grand Canyon. As stated on page 184 of the 1994 NPS Report to Congress, one of the six management objectives for the park is: "Provide a quality aerial viewing experience while protecting park resources (including natural quiet) and minimizing conflicts with other park visitors."

Number of Operators and Operator Fees

An environmentalist group states that one third of the Grand Canyon air tour operators dodge fees and that air tour numbers may be twice those reported. Another commenter stated that tribes in the GCNP vicinity should be able to regulate and collect fees for the airspace on their lands as the NPS does.

FAA Response: Fee collection is beyond the scope of Notice 96–11. Through the 1993 Omnibus Budget Reconciliation Act, Congressional action required the NPS to collect a commercial tour use fee of $25 for aircraft with 25 seats or less and $50 for aircraft with more than 25 seats. Collection and enforcement of this fee is the responsibility of the NPS and the NPS can use all information available to assure that fees are collected in accordance with the law. Nevertheless, payment of fees has no direct relationship to this rule. Regarding the collection of fees by Native Americans, Congressional action would be required to authorize the collection of an overflight fee.

Noise Level Surveys, Monitoring, Studies, and Modeling

Some commenters state that the NPS overstated the impact of air tour overflights on park visitors in its 1992 visitor survey. For example, the commenter noted that backcountry users do not venture out of the Bright Angel Flight-free Zone, and some complaints were collected at a time when an aerial search was being made for an escaped convict and NPS service flights were on-going. Furthermore, the commenters complained that the NPS made no attempt to distinguish what type of flights were causing the annoyance.

Other commenters state that the NPS-solicited surveys show an unusually high number of complaints because more complaints are received from solicited surveys than from unsolicited reports.

Another commenter says that some of the survey questions were biased because they used the word "noise" instead of "sound" (e.g., visitor perceptions of aircraft noise versus aircraft sound).

Industry commenters also express doubts about the noise monitoring studies contracted by the NPS. Several commenters state that monitoring sites were directly under, or in close proximity to, the tour routes flown by air tour operators as directed by SFAR 50–2.

Several commenters state that although Public Law 100–91 directed the NPS to distinguish between the impacts caused by sightseeing aircraft and other types of aircraft, the noise monitoring results do not distinguish the amount of noise attributable to different types of aircraft.

Industry commenters also object to the NPS model for noise. One commenter states that the noise model used for establishing predicted aircraft noise impacts eliminated the coefficient of lateral over-the-ground attenuation. BIA states that the NPS established no baseline other than ambient sound levels, which does not differentiate among the impacts on visitors from different types of flights. Another commenter states that the noise analysis is flawed because it was based on NPS estimates of fleet sizes, aircraft use levels, and certificated noise levels for aircraft in that fleet, which do not necessarily indicate the actual noise an aircraft will produce in flight.

FAA Response: The NPS noise level surveys, dose-response studies, and acoustic modeling were conducted by internationally-respected acoustical research firms known for the quality of their work. These firms advised the agency on the design, analysis, and conduct of these surveys and studies. The NPS consulted extensively with these firms to ensure that the conclusions in the NPS report to Congress were drawn directly from study results. The studies were based on standard research methodologies, including statistically valid random samples, and have been reviewed by scientists not affiliated with the NPS or the FAA. They represent the only large-scale, scientifically sound studies of park noise environments and park visitor reactions to aircraft noise in outdoor recreation settings.

Acoustic modeling is the accepted approach for addressing noise concerns over large areas such as Grand Canyon. Noise level measurements only reflect individual site conditions but can be productively used to improve the accuracy of the modeling. Both the FAA and NPS used a standard aircraft noise database and made adjustments based on actual field measurements. The measured ambient background sound levels (the baseline for natural quiet taken from Grand Canyon noise level measurements) were factored into FAA and NPS modeling efforts, and both models were able to factor in terrain effects, albeit to different extents. Finally, data from an FAA survey of air tour operators was used by both agencies to provide the aircraft types, numbers, and routes used in the acoustic modeling. Although the FAA and NPS noise models are quite different, the FAA found sufficient convergence in modeling results to suggest that valid conclusions can be drawn from both models.

NPS acoustic measurements found that the sound of aircraft was measurable for some part of the time at virtually all areas where sound data was collected, including a wide variety of locations and environments well within the flight-free zones as well as near the flight routes. This is consistent with NPS modeling which suggested that aircraft sound can carry 13–16 miles in the eastern end of the Canyon and even further on the western end—enough to fully penetrate to the center of every flight-free zone created by SFAR 50–2.

Results from the 1992 survey show that almost 75 percent of fall backcountry and river oar visitors who heard aircraft responded that they were moderately to extremely annoyed (NPS Report to Congress, Page 139). The NPS

did not anticipate this level of annoyance from groups supposedly protected by the SFAR and was an important indication to the NPS that additional action was needed to protect quiet in the park. For all categories of visitors, the stronger category "interference," was selected more frequently than the weaker category, "annoyance." Of the visitors who heard aircraft, over 90 percent of fall backcountry visitors and 100 percent of river oar visitors responded that aircraft noise interfered with their appreciation of natural quiet (NPS Report to Congress, Page 192). Both the dose-response study and the survey found visitor results varied by activity and site.

Aircraft noise is the subject of the second largest number of complaints in the park. Complaints are an indicator that a problem may exist, but scientifically valid surveys have been consistently shown to be necessary to accurately measure visitor reactions.

The NPS found that noise from the air tour routes in place under SFAR 50–2 is clearly audible (and was measured) from many locations within Flight-free zones, accounting for the results cited by some commenters. The search for the escaped convict referred to did not affect the study which was suspended during that period.

NPS-contracted acoustic monitoring was conducted with a technician recording the type of aircraft observed and measured. The tour flights all occurred on standard routes and altitudes and were easy to separate from any other aircraft, such as NPS flights and high altitude commercial jets. In fact, pages 187–188 of the NPS report to Congress provide a breakdown of the amount of time aircraft were audible by aircraft type during the study, and also show the variety of sites both within flight-free zones and under or near flight corridors.

In the NPS deliberations that led to development of the survey questions the question of inducing bias by the use of terms, or by the wording or sequence of questions, was very carefully considered and tested before the study. The term "noise" was used in the survey questionnaires very carefully to allow correlations with the large body of aircraft noise research conducted primarily in airport environs. The term "sound" was used where possible, and the analysis of the responses suggested that the terms did not affect the results.

The data and the modeling on which the proposed rule is based are scientifically valid and the best available. The monitoring program resulting from this rule will also provide additional data which will help to further validate and refine the modeling.

In formulating the Comprehensive Noise Management Plan for GCNP, the FAA and the NPS expect to conduct further research regarding visitors' reactions to noise and natural quiet issues to validate the current studies and the two agencies' respective modeling systems.

Section-by-Section Discussion of Final Rule

The following is a brief summary of the major proposals, and the comments, received. The FAA's response to those comments and the final rule action follow.

Section 93.301 Applicability

Proposed § 93.301 described the lateral and vertical dimensions of the SFRA. Notice 96–11 solicited comments on modifying the dimensions of the SFRA by extending the SFRA north-northeast of the confluence of the Little Colorado and Colorado Rivers; extending the SFRA southward below the Bright Angel and Desert View Flight-free Zones; extending the SFRA at the western edge to cover that portion of the Grand Wash Cliffs in the park that was inadvertently omitted from the 1987 NPS Grand Canyon Aircraft Management Recommendation and the original rule; and increasing the altitude of the SFRA ceiling from 14,499 to 17,999 feet MSL.

Comments

Heli USA states that the revised SFRA could affect access to the Grand Canyon West airport.

An individual from the Navajo Area Office of the BIA says that the extension of the SFRA to the north-northeast of the Little Colorado and Colorado Rivers would introduce air traffic into an area outside the current SFRA, over the Marble Canyon and Navajo land, which did not have traffic before.

The Experimental Aircraft Association (EAA), the General Aviation Manufacturers Association (GAMA), and the Aircraft Owners and Pilots Association (AOPA) object to the proposed extension of the SFRA ceiling. EAA states that the FAA has not presented any information showing that any commercial sightseeing aircraft are using or plan to use these altitudes. GAMA says that requiring turbo-charged piston-engine and turboprop turbine-powered aircraft that have optimum operating altitudes between 14,500 and 17,000 feet to take alternate routes around the SFRA will add considerable costs to implementing the rule. AOPA says that the proposed requirement is discriminatory towards general aviation because it forces all general aviation flights over the Grand Canyon to take place at a higher altitude than flights by commercial air tour operators.

Another commenter says that Notice 96–11 is counter to FAA's General Aviation Policy Statement (adopted by the FAA Administrator in 1995), which calls for fostering general aviation and maintaining safety through voluntary compliance and other means to reduce the regulatory burden on general aviation.

Another commenter contends that Notice 96–11 will impact many other aircraft who operate across Northern Arizona between 14,500 MSL and the base of Class A airspace under VFR. The commenter adds that increasing the SFRA altitude would make it impossible to fly over the SFRA without obtaining an ATC clearance to operate in Class A airspace.

The Soaring Society of America, Inc. (SSA) opposes the proposed rule as it applies to quiet and unobtrusive civil aircraft such as sailplanes and gliders. Since airplane and helicopter sightseeing overflights are the perceived cause of the noise problem in the Grand Canyon, the SSA believes the regulations should be tailored specifically toward such aircraft and the FAA should permit sailplanes and gliders to continue to operate under the current SFAR 50–2. SSA refers to the Department of the Interior's Report on Effects of Aircraft overflights on the National Park System which suggests to that society that sailplane "noise" is approximately equal to daytime ambient noise, therefore nothing will be gained by burdening sailplanes and gliders with the proposed rule.

FAA Response and Final Rule Action: In 1989, the FAA revised the southern boundaries of the SFRA in the West Canyon area to establish a corridor to the Grand Canyon West Canyon Airport. This corridor was designed to permit access to the airport to assist the economic development of the Hualapai tribes. Nothing in this final rule modifies the corridor that was established in 1989. The FAA will reserve its response to comments regarding specific routes until after the comment period closes for the Notice of Proposed Routes.

Increasing the SFRA ceiling from 14,499 feet MSL upward to but not including 18,000 feet MSL is intended to prevent commercial sightseeing operators from circumventing the intent of this rule by overflying the fly free zones between 14,500 feet MSL and 17,999 feet MSL.

The upward expansion of the SFRA does not impose a barrier to general aviation aircraft. The effect of the expansion is to regulate commercial sightseeing flight operations pursuant to § 93.315 which permits only those operations authorized in operations specifications.

The Grand Canyon attracts an unusual level of air traffic. The FAA continues to be concerned that safety could be impacted by the concentration of air traffic, including powered and nonpowered aircraft over GCNP. Therefore, it opts not to relax SFRA operating requirements for sailplanes and gliders. The FAA adopts the SFRA as proposed.

Section 93.305 Flight-Free Zones and Flight Corridors

Proposed § 93.305 described the lateral and vertical dimensions of the proposed flight-free zones; proposed creating two new flight-free zones: The Sanup Flight-free Zone and the Marble Canyon Flight-free Zone; proposed merging the Toroweap/Thunder River and Shinumo Flight-free Zones and extending this zone to the park boundary; proposed expanding Desert View Flight-free Zone to the north and east to the GCNP boundary; and proposed extending the current Bright Angel Flight-free Zone to the north to the GCNP boundary.

Proposed § 93.305 also described the five flight corridors that allow access through the canyon area for general aviation and transient operations and routes for commercial sightseeing flights.

The FAA proposed to add two new flight corridors in the proposed Marble Canyon Flight-free Zone. In addition, the FAA proposed to close the Fossil Canyon Corridor, extend the Zuni Point Corridor into a Y-shape in the north, and shift the southern portion of Dragon Corridor to the west. The FAA also proposed that commercial sightseeing aircraft would be allowed to operate in only one direction in the Zuni Point Corridor.

General Comments on Flight-free Zones and Flight Corridors

Safety Comments: Several commenters express concerns about safety if the proposed rule is implemented. According to these commenters, the combination of restricted corridors, changes in route structure, and curfews would increase the density of aircraft in the available airspace, thereby increasing the potential for a mid-air collision.

The NTSB commented that the compression of air traffic into smaller airspace would limit safe maneuverability in marginal weather conditions, funnel air traffic into fewer routes, and in some areas, compress slower single-engine airplanes, helicopters, and higher performance airplanes into the same airspace. This would increase the likelihood of midair collisions in GCNP. The NTSB adds that the FAA should systematically analyze the possible effects of the proposed changes on air safety and ensure that these results are considered before adopting the proposal.

One commenter disagrees with the claim that the proposed rule would create an unsafe environment. The commenter points to the FAA's 1995 Report to Congress, "Report on the Study on Increased Air Traffic over Grand Canyon National Park," which states that it would be highly unlikely that operations would ever approach saturation level. The commenter also points out that the proposed rule allows pilots to make evasive flight maneuvers necessary to maintain safety.

General Aviation: One commenter objects to the proposed flight-free zones because they will effectively ban general aviation from flying over the park. The average general aviation aircraft is not equipped to operate at the minimum altitudes required by the proposal. According to the commenter, the proposed new flight-free areas will prohibit general aviation aircraft from flying directly from Las Vegas to either Albuquerque or Farmington. The commenter asks that general aviation aircraft be allowed to overfly the flight-free areas at altitudes above 10,499 MSL.

Native American Tribal Lands: In a statement given at the Congressional hearing, representatives of the Havasupai Tribe say that a foreseeable result of the proposed changes will push overflights south of GCNP resulting in adverse environmental effects. In a comment subsequently submitted to the docket, representatives of this Tribe say that while reducing the negative impacts of overflights by regulating the airspace within the park is worthwhile, the result will be to increase aircraft noise outside the park, including the Havasupai reservation. The commenter adds that there has been no analysis of the environmental effects of these regulations outside the park boundaries and that "the FAA's unjustified rush to action must be slowed."

Other General Comments: Two commenters remind the FAA that flight-free zones are not noise free zones since noise travels 13 to 16 miles; nor are they entirely flight free since high flying aircraft still overfly them. These commenters point out that while flight corridors are necessary, they are not a solution for the noise problem since they heavily affect several scenic areas in the park, such as Point Imperial, Nankoweap, Cape Final, Unkar, Hermit, Boucher, and Crystal Rapids trails.

FAA Response and Final Rule Action: The comments regarding safety express similar concerns: (1) Flight-free zones require changes to routes, (2) flight-free zones create smaller available airspace, (3) the effect of curfews on the density of air traffic, (4) increased possibility of midair collisions because of route changes and combining aircraft of differing flight characteristics. Each of these general areas of concern will be addressed separately.

Flight-free zones require changes to routes: The modified and new flight-free zones are necessary to comply with the mandate of Public Law 100–91 to achieve substantial restoration of the natural quiet in GCNP. One of the primary responsibilities of the Las Vegas Flight Standards District Office (FSDO), through a special unit, is to provide oversight of the commercial sightseeing operators in the Grand Canyon. The members of this unit are all highly experienced with this subject and have worked closely with the commercial sightseeing operators and the NPS. The Notice of Availability of Proposed Air Tour Routes of GCNP (Notice of Proposed Routes), which is published simultaneously with this final rule, explains how interested persons may obtain detailed information on the routes. The FAA will review the comments received from the public related to the notice of proposed routes and if appropriate, make modifications to the routes.

Flight free zones create smaller available airspace: The FAA agrees with the NTSB that the additional flight-free zones create a smaller airspace for air tour aircraft. The NTSB is concerned that the smaller airspace may limit "safe maneuverability in marginal weather conditions." As in SFAR 50–2, the FAA has specifically included language in § 93.305, Flight-free zones, that will allow air tour aircraft to fly within the flight-free zones "in an emergency or if otherwise necessary for safety of flight." The intent of this language is to allow flight into a flight-free zone for any safety reason including emergencies. This language will also enable pilots to deviate from course to avoid other aircraft and unsafe weather conditions. This provision will be liberally construed when applied in the interests of safety. This should resolve any concern about the ability of an aircraft to maneuver in a smaller available

airspace. Additionally, the FAA agrees with a commenter that the airspace has not approached any unsafe saturation level.

The effect of curfews on the density of air traffic: The FAA agrees that curfews on the west end of GCNP might create a situation whereby large numbers of aircraft could attempt to enter the air tour routes at the same time and along the same routes. Based on the FAA's safety analysis of the air tour flights originating from the Las Vegas area, the FAA has decided to exempt the routes beginning on the western end of the park from any curfew.

However, § 93.316(a) prescribes a fixed curfew. Specifically, no person shall conduct commercial sightseeing operations within the Dragon and Zuni Corridors during the following periods. (1) Summer season (May 1–September 30)—6 p.m. to 8 a.m. daily; and (2) Winter season (October 1–April 30)—5 p.m. to 9 a.m. daily. (See discussion later in the document.)

Increased possibility of midair collisions because of the changes and combining aircraft of differing flight characteristics: In light of these concerns the FAA will change the flow of traffic along the routes on the eastern side of the park (e.g., Dragon corridor) to a clockwise direction. This change will prevent conflict with aircraft merging from other existing and proposed routes. Also, the clockwise direction was designed for other safety reasons. (See discussion/response on Zuni Corridor.) More detail is contained in the Notice of Proposed Routes that is being published simultaneously with this final rule. Regarding combining aircraft of differing flight characteristics, the FAA will continue its practice of separating fixed-wing aircraft from rotary-wing aircraft through altitude restrictions. Experience, cooperation, and a proactive partnership developed between the commercial sightseeing operators and the FAA resulted in flight procedures that are included in the operator's FAA approved operations manual. The FAA believes that these established procedures will prevent potential conflicts.

Likewise, for safety, the rule continues to segregate commercial sightseeing operations from general aviation/transient operations in the SFRA. Commercial operators, under their operations specifications, are held to a higher operational proficiency standard that addresses the complexities of the route systems, terrain, flight corridors, weather norms, etc. It would be unrealistic to impose an equally high proficiency standard for the occasional general aviation pilot. Therefore, the FAA continues to believe that it is necessary to segregate these communities of operators.

General Comments on Commercial Air Tour Routes

Several commenters state that it is difficult to comment on the effects of the proposed changes since the proposed routes are not included in Notice 96–11. Nevertheless, the FAA received some general comments on potential route changes. Twin Otter says that the FAA has not proposed one quieter aircraft route, even though the NPS had proposed, in its Report to Congress, that some flight tour routes be restricted to "quiet aircraft only."

Southwest Safaris says the helicopter operations have been given preferential treatment by the FAA. They are allowed to fly from 500 to 1,500 feet lower than fixed-wing aircraft and to fly shorter routes in the middle of the park. According to the commenter, helicopter tours are on the rise and constitute much of the noise problem.

FAA Response and Final Rule Action: The FAA agrees with the comments that the operators should have an opportunity to comment on proposed routes. Simultaneously with this final rule, the FAA is publishing a Notice of Proposed Routes, which includes the proposed tour routes within the Grand Canyon. Operators will have an opportunity to comment on the proposed routes. The FAA will reserve its response to comments regarding specific routes until after the comment period closes for the Notice of Proposed Routes.

Regarding routes for "quiet aircraft," simultaneously with the final rule, the FAA is publishing an NPRM, Noise Limitations for Aircraft Operations in the Vicinity of the Grand Canyon National Park, which proposes certain routes that will be limited to noise efficient aircraft only.

The FAA disagrees with the comment that helicopter operations have been given preferential treatment. Regarding altitude, the FAA's long-standing policy is to separate helicopters and fixed-wing aircraft because the two classes of aircraft generally have vastly different flight characteristics. Traditionally helicopters, normally slower and more maneuverable than fixed-wing aircraft, have been allowed to fly lower. The FAA intends to continue this safety rationale.

Comments on Marble Canyon Flight-free Zone—Navajo Bridge and North Canyon Corridors

Three commenters support the Marble Canyon Flight-free Zone. The Sierra Club-Grand Canyon Chapter states that the flight-free zone would be of particular benefit, particularly to fishers and river runners, and believes that the rim rather than the river bank should be the eastern boundary of the flight-free zone.

Another commenter suggests that the proposed Marble Canyon Flight-free Zone be modified to protect significant locations such as Blue Spring or other sacred places in the Little Colorado vicinity. Also, according to the commenter, no flights should be allowed over popular side canyon attractions such as North Canyon, South Canyon, Silver Grotto, and Saddle Canyon.

EAA states that the top of all three sections of this flight-free zone should be reduced from 14,000 to 8,500 feet MSL to allow general aviation flights between Las Vegas, Nevada and Farmington, New Mexico.

Twin Otter states that the flight-free zone is too small to be meaningful and would eliminate a popular air tour route.

FAA Response and Final Rule Action: The FAA has reconsidered its proposal for the Marble Canyon flight-free zone in light of the comments received. The FAA has determined that the proposed flight-free zone would provide only a minimal noise mitigation benefit because of the narrow dimensions. In addition, the FAA agrees that the proposed zone could have impacted general aviation flights between Las Vegas and Farmington. Therefore, the final rule eliminates the Marble Canyon Flight-free Zone.

However, the FAA is modifying the minimum sector altitude for this area. (See discussion under § 93.307, Minimum Flight Altitudes.)

Comments on Desert View Flight-free Zone and Zuni Point Corridor

Several commenters state that making Zuni Point Corridor one-way may present safety problems due to inclement weather and unexpected weather changes in the north canyon. GCATA states that because of the lack of a weather reporting station on the north rim, tour pilots proceeding through the Zuni Point Corridor will be required to make weather decisions in the vicinity of the "Y" on what direction to proceed.

Papillon states that the noise problem over the area between the Little Colorado River confluence and Imperial Point has been exacerbated by the piston-driven single and multiengine six to nine passenger airplanes. To clear the north rim, these airplanes climb. When entering the canyon via Zuni Point

Corridor, these types of airplanes should enter at a higher level, thus eliminating the noisy climb configuration.

The Sierra Club-Grand Canyon Chapter supports the enlargement of the Desert View Flight-free Zone (as does NPCA) but states that the Zuni Northwest Corridor cuts though the Critical Noise Sensitive Area that has Point Imperial at its center. This corridor is also a problem for users of the Saddle Mountain-Nankoweap Basin area. The Sierra Club-Angeles Chapter believes that the proposal should close Zuni Point Corridor because it impacts at least six trails, four permanent stream basins, important archaeological and historical sites, and Papago Point, the only major point on the south rim where one could formerly find solitude and escape the sounds of auto traffic.

FAA Response and Final Rule Action: Concurrent with the publication of this final rule, the FAA is publishing a Notice of Proposed Routes discussing route structures and directions of flights. The FAA will consider pertinent comments received in response to Notice 96–11 regarding routes, as well as any additional comments submitted in response to the Notice of Proposed Routes. In response to the perceived safety problems regarding weather, the FAA will route traffic in a clockwise fashion through the Dragon and Zuni Corridors. This flow will allow operators to better observe weather conditions around the North Rim so as to avoid encountering adverse weather condition in the vicinity of the North Rim, e.g., high winds, low visibility, turbulence, etc. The FAA believes this flow will enhance safety by pilots having the opportunity to take appropriate actions to avoid these conditions. Noise mitigation will be an additional benefit, as aircraft will no longer be climbing as they pass near Point Imperial.

Comments on Bright Angel Flight-free Zone, Zuni Point, and Dragon Corridors

NPCA notes that the NPS has estimated that the one-way restructuring of the Zuni Point Corridor will add 3,800 operations into the Dragon Corridor. Some commenters object to the northern extension of Bright Angel Flight-free Zone. Two other commenters say that the northern extension will lengthen the distance of the Grand Discovery Tour by 20 percent, which will increase operator costs and require operators to fly over the highest points of the north rim, resulting in frequent weather cancellations.

The Sierra Club-Grand Canyon Chapter supports the enlargement of the Bright Angel Flight-free Zone. Twin Otter and Grand Canyon Airlines recommend that the Dragon Corridor be converted within 2 years to a quiet airplane flight corridor. The commenters also recommend that the FAA define what operating characteristics an airplane model must have in order for it to conduct round-trip air tours within Dragon Corridor and then immediately permit such fixed-wing air tours within this corridor (just as the FAA now permits out-and-back helicopter tours).

Grand Canyon Airlines states that SFAR 50–2 management policies have encouraged rotorcraft operators to concentrate on Dragon Corridor tours. Since 1994, when helicopter operators began concentrating their tours within the Dragon Corridor, Grand Canyon Airlines has conducted 35 percent fewer air tours in this area. This commenter wants to be permitted to conduct similar round-trip Dragon Corridor tours to remain competitive if the FAA adopts the extension of the north rim air tour route.

Grand Canyon River Guides believes that the out-and-back helicopter route into Dragon Corridor should be abolished. This route allows helicopters to offer a shorter trip which is similar in cost to the least expensive tour of the larger, quieter fixed wing operators which carry more people with much less impact. According to the commenter, this shorter route is causing a very negative trend as noticed by the increased helicopter traffic on the Dragon Corridor with each passing year.

NATA is pleased that Notice 96–11 establishes the dog-leg within the Dragon Corridor because it would route air traffic away from the only location on the rim of the canyon where air tours and ground visitors interact. Papillon also agrees with the proposed change to relocate the south end of Dragon Corridor to the west.

USATA contends that the current routes that air tour operators fly encompass only 17 percent of the entire park. With the Dragon Corridor "dog leg," the front country areas of the park (where 99 percent of all ground users visit) would be 100 percent protected from air tour noise. If flights were to double or even quadruple, one could expect the number of aircraft seen or heard to remain well within reason at a maximum of less than one aircraft per hour.

The Sierra Club—Grand Canyon Chapter, NPCA, and Grand Canyon River Guides do not support the changes to Bright Angel and Toroweap-Shinumo Flight-free Zones to accommodate the Dragon Corridor dog leg. They argue that these changes would degrade a portion of the park on the south rim that is currently relatively quiet. This area includes Havasupai Point. The Sierra Club suggests extension of the southwest corner of the Bright Angel Flight-free Zone (from 36°09'31" N, 112°11'15" W; to approximately 36°02'35" N, 112°14'30" W; then southeast along the GCNP boundary).

The Sierra Club also points out that the seventh point (36°01'16" N, 112°11'39" W) should be approximately 36°00'58" N, 112°11'45" W.

AOPA says that changes to the Dragon Corridor could make navigation extremely difficult and increase the chance that a pilot could inadvertently transgress into a flight-free zone.

FAA Response and Final Rule Action: Flight-free zones are being expanded and/or modified to aid the substantial restoration of the natural quiet, as mandated by Public Law 100–91. As stated by Senator John McCain in the legislative history of Public Law 100–91:

The purpose of flight-free areas is to provide a location where visitors can experience the park essentially free from aircraft-sound intrusions. The boundaries of these flight-free zones are meant to be drawn to maximize protection to the backcountry users and other sensitive park resources. The extent of these areas should be adequate to ensure that sound from aircraft traveling adjacent to these zones is not detectable from most locations within the zones. It is within these zones that we expect to achieve the substantial restoration of the natural quiet. (Congressional Record—Senate, p. S10799, July 28, 1987).

The FAA agrees that there should be incentives for operators to convert to noise efficient aircraft in the Dragon Corridor; those incentives are addressed in the NPRM being published simultaneously with this final rule.

The FAA agrees with the Sierra Club that the Bright Angel Flight-free Zone boundary description is incorrect, and corrects it in this action.

The FAA has adopted the proposed shift to the west in the Dragon Corridor (the "dog-leg") because it provides important noise mitigation to the Hermit's Basin Region and presents no safety concerns. This action responds to requests made by both the majority of the operators and NPS. By leaving the Dragon Corridor open, this action maintains certain viable commercial sightseeing routes over the canyon while providing greater noise mitigation in other parts of the park from larger flight-free zones. The legislative history of Public Law 100–91 indicates that it was not the intent of the legislation to

ban aircraft from overflying the Grand Canyon.

The change is consistent with the 1987 NPS recommendation and responds to comments made at the Flagstaff public meeting. These changes provide for noise mitigation while supporting a viable industry at the eastern end of the canyon.

The corridors will remain 2 nautical miles wide for commercial sightseeing operations and 4 nautical miles wide for general aviation and transient operations. The addition of a bend or "dog-leg" in the Dragon Corridor will make navigating the corridor a bit more involved but will be manageable. The revised Grand Canyon VFR Aeronautical Chart will contain latitude/longitude and VFR check points to assist pilots navigating in the area. Specifically, the corridor centerline and "turn-point" will be identified electronically via latitude/longitude coordinates. The "turn-point" will be identified by VOR/DME information from the Grand Canyon VOR. And the corridor and "turn-point" will be identified by topographic features as well.

Comments on Toroweap/Shinumo Flight-free Zone and Tuckup Corridor

Several commenters state that the extension of the Toroweap/Thunder River Flight-free Zone and the merger of Toroweap/Thunder River with the Shinumo Flight-free Zone will eliminate certain routes, thus reducing scenic viewing while extending tour times. One commenter adds that this extension is meaningless because air tour aircraft diverting around National Canyon will still be audible since the flight-free extension is too small for effective noise attenuation.

An individual from the Navajo Area Office of the BIA states that the expansion of Toroweap/Shinumo Flight-free Zone will block flight departures on the Brown 3 route from the Bar 10 airstrip which provides river runner support to the Hualapai Tribe.

Several commenters support expansion of the Toroweap/Shinumo Flight-free Zone and recommend that it be extended even farther back from the south rim to reduce the visual and noise intrusions from air tours. The Sierra Club—Grand Canyon Chapter states this is necessary to address the concern that air tours will fly just outside the flight-free zone boundary over the river corridor. They add that the existing flight-free zone located within a 1.5 nautical mile radius of the Toroweap overlook is inadequate and should be expanded.

The Sierra Club points out an error in the flight-free zone: the second point (112°3'19" W) should be 112°13'19" W and the third point (36°02" N) should be 36°20'02" N.

FAA Response and Final Rule Action: In analyzing the commenters' statements on the extension of the southern boundary, the FAA believes that the commenters are referring to the Blue 1 route. The FAA is soliciting comments in the NPRM that is published simultaneously with this rule regarding the feasibility of limiting a portion of the Blue 1 route in the National Canyon to noise efficient aircraft.

In response to comments regarding routes, the FAA will consider pertinent comments received in response to Notice 96–11, as well as any additional comments submitted in response to the Notice of Proposed Routes.

Any further expansion of the Toroweap Flight-free Zone will need to be considered in the context of the Comprehensive Noise Management Plan.

The FAA disagrees that the rule will result in an adverse effect on the safe operation of the Bar 10 airstrip or black river runner flights.

The FAA agrees with the Sierra Club that the Toroweap/Shinumo Flight-free Zone boundary description is incorrect, and corrects it in this action.

The FAA will reserve its response to comments regarding the Brown 3 commercial sightseeing tour route until after the comment period closes for the Notice of Proposed Routes.

Comments on Sanup Flight-Free Zone

The Sierra Club-Grand Canyon Chapter supports the new Sanup Flight-free Zone. The chapter suggests that boundaries be changed to give some protection to the Shivwits Rim and Sanup Plateau.

AOPA states that the new Sanup Flight-free Zone would force an increase in the minimum enroute altitude for Victor Airway 235 from 10,000 to 14,500 feet MSL between Peach Springs and Mormon Mesa navigational aids; that portion of the airway would be unusable by general aviation aircraft. One commenter feels that this increase would adversely affect safety and cause burdensome requirements for oxygen equipment because of the increased altitude.

EAA wants the ceiling of the flight-free zone lowered for general aviation operations from 14,000 to 8,500 MSL. This change would accommodate general aviation flights between Las Vegas and Albuquerque.

The FAA also received several comments regarding the possible impacts of the proposed Sanup Flight-free Zone on commercial sightseeing tour routes.

FAA Response and Final Rule Action: After analyzing the impact on VFR and IFR traffic, the FAA has adopted the Sanup Flight-free Zone. However, the vertical limits of the Sanup Flight-free Zone will be at 7,999 feet MSL. This will accommodate general aviation aircraft operations between Las Vegas and Albuquerque. By lowering the vertical limit of this flight-free zone, the minimum enroute altitude for V–235 remains unchanged.

In response to comments regarding routes, the FAA will consider pertinent comments received in response to Notice 96–11, as well as any additional comments submitted in response to the Notice of Proposed Routes.

Comments on Elimination of Fossil Corridor

GCATC states that the closure of the Fossil Canyon Corridor could possibly bring an end to Las Vegas-based air tours of GCNP. Although the FAA claims that only a low amount of traffic goes through this corridor, in fact most Las Vegas-based operators conduct air tours over the Blue 1 route which traverses the Fossil Canyon Corridor and adjacent lands. If this corridor were to close, the 200-mile air tour route from Las Vegas to Tusayan would include only approximately 20 miles over less striking portions of the Grand Canyon, including only 4 miles over GCNP. Such a decrease in Grand Canyon overflight would virtually eliminate the demand for such flights.

The individual from the Navajo Area Office of the BIA says that the Hualapai Tribe utilizes the Brown 1A route to support river runner traffic across Kaibab Plateau, which will be eliminated by the closure of the Fossil Corridor, as will the Blue 1A route be eliminated due to closure of the Fossil Corridor.

The Sierra Club-Grand Canyon Chapter and Grand Canyon River Guides support closing the Fossil Canyon Corridor.

FAA Response and Final Rule Action: The FAA recognizes that closing Fossil Canyon Corridor will affect some air tour routes. However, this action is necessary to aid in the goal of substantially restoring natural quiet to the park, as mandated by Public Law 100–91. The FAA believes, based on its 1995 survey of air tour operators and the routes that they fly, that Fossil Canyon Corridor is not heavily used for commercial sightseeing purposes and

those few operators who use it will have alternate routes available.

In response to comments regarding routes, the FAA will consider pertinent comments received in response to Notice 96–11, as well as any additional comments submitted in response to the Notice of Proposed Routes.

Section 93.307 Minimum Flight Altitudes

Proposed § 93.307 set forth different minimum altitudes in sectors and corridors for commercial sightseeing operations and transient and general aviation operations to separate these operations to the maximum extent practical. Notice 96–11 solicited comments concerning minimum altitudes for Navajo Bridge Corridor at 5,000 feet MSL for commercial tour operations and 8,000 feet MSL for general aviation and transient operations.

Comments on Minimum Flight Altitudes

The Northern California Aviation Users Working Group (NCAUWG) says that the NPS did not comply with Public Law 100–91 because it did not establish the "proper minimum altitude which should be maintained by aircraft when flying over units of the National Park System."

Kenai Helicopters, Inc. states that although Notice 96–11 does not change many of the minimum altitudes through the flight corridors, serious consideration for lower altitudes, coupled with noise attenuating flight procedures and maneuvers, should be analyzed in order to restore quiet in the flight-free zones in the best way.

The Sierra Club-Grand Canyon Chapter states that Notice 96–11 will not prevent flights below the canyon rim. This commenter suggests that the minimum flight altitude between Boundary Ridge and Supai be raised to 10,500 feet MSL to prevent aircraft from flying below the rim at Point Imperial, and that the FAA verify minimum flight altitudes for the entire SFRA to prevent below rim flights.

FAA Response and Final Rule Action: The FAA does not agree with these comments. The NPS Report to Congress concluded that establishing a simple minimum altitude for aircraft overflights over all units of the National Park System was neither feasible nor necessary. Instead it recommended that all reasonable methods and tools be used in issue resolution: voluntary agreements, quiet aircraft incentives, spatial zoning, altitude restrictions, operations specifications, and limits on time of operation. Public Law 100–91 mandated much more than an appropriate minimum overflight altitude for GCNP. Specifically, section 3 required the FAA to prepare and issue a comprehensive airspace management plan, which in part provided for provisions prohibiting below rim flights and designation of flight-free zones. Section 3 of Public Law 100–91 prohibits the flight of aircraft below the rim of the Canyon. Consequently, Kenai Helicopters, Inc.'s suggestion is not appropriate. Finally, the FAA believes the clockwise flow through the Zuni and Dragon Corridors will preclude aircraft from flying below the rim at Point Imperial.

In order to simplify the northeast sector of the SFRA, the FAA has combined the Marble Canyon and the North Canyon sector into one sector and renamed this section the Marble Canyon Sector. This sector will have a minimum sector altitude of 8,000 MSL.

Section 93.316 Limitations for Commercial Sightseeing Operations

The FAA proposed several additional methods to help achieve the objective of restoring natural quiet. One such method was flight-free periods (curfews). Proposed § 93.316(a) provided for both a fixed curfew and a variable curfew.

Comments on Fixed and Variable Curfews

A number of commenters (e.g., Twin Otter, HAI, Kenai Helicopters, an individual from the Navajo Area Office of the BIA) say that curfews could create significant congestion and safety problems as air tour operators reschedule aircraft to arrive at the edge of the SFRA at the same time.

GCATA states that GCNP Airport will have a major traffic problem with all Las Vegas operators arriving at the same time for one runway of operations. Also, since all helicopter operators have moved to the Airport, they will be ready for their initial launch of the business day. GCATA asks which operator will get priority, and says that the number of flights could create havoc for the tower operators at the Airport. Another problem is that all airplanes arrive from the west and helicopters will be departing on the east side. GCATA asks how the tower operators would handle this. The commenter believes that the curfews will push airports to their maximum operation and questions if this is safe.

According to Las Vegas McCarran Airport, the majority of air tour operators operate by "banking" Grand Canyon air tour flights. In other words, based on passenger demand during a given period, each operator departs a number of aircraft more or less simultaneously from an origin airport to perform Grand Canyon air tours.

This commenter states that, under the fixed curfew, peak operations in the SFRA are anticipated to occur between 8 a.m. and 10 a.m. Under the variable curfew, total operations are anticipated to increase substantially from 9 a.m. through 1 p.m. In addition, for airports in the Las Vegas region, a total of 60 Grand Canyon air tour operations would be affected by the proposed fixed curfew, and 99 by the proposed variable curfew. These aircraft operations would be required to alter the existing times of operations to non-curfew hours, or operate on the Blue Direct route, which is not considered an air tour route and not subject to the restrictions proposed in either curfew alternative.

Several commenters are concerned about the economic impact of curfews. Heli USA states that the proposed curfews would eliminate 20 percent of its flights and cause severe economic problems.

GCATC says that the FAA's estimate of $6.6 million in annual loss of revenue, as a result of fixed curfews, is underestimated because: (1) The FAA states that all losses would be incurred in the summer season (May 1–September 30), wrongly assuming that all flights during the winter season (October 1–April 30) can be rescheduled. Although rescheduling of some winter flights may be possible, the flexibility of both air tour operators and passengers is limited and, consequently, not all passenger groups can be accommodated under FAA's proposed restricted operating hours. (2) The proposed fixed curfew forces air tour operators to begin tours substantially later and end them substantially earlier than under the dusk-to-dawn flight period currently allowed. For some months, the FAA's proposal may shorten available flight time by 25 to 33 percent, causing operators to lose multiple flights on a daily basis.

Comments from the Grand Canyon Trust state that the FAA's assessment of the costs of basic curfews is fundamentally flawed in that it makes no attempt to anticipate how mismatches between supply and demand are likely to be resolved in the marketplace. Given that Grand Canyon tours are once-in-a-lifetime experiences, and that roughly 60 percent of all visitors are foreigners for whom sightseeing tours are only one part of a more extensive vacation package, consumers are more likely to be relatively price insensitive, particularly at the margin. This implies that operators will likely be able to more

than offset revenue losses resulting from the flight curfews proposed by the FAA. The commenter suggests that the near-term response of air tour operators to the regulation is likely to be a modest shift in prices upward which will allow them to recover the revenues lost due to canceled flight operations. Over the longer term, operators will be able to replace their existing aircraft with larger, higher capacity aircraft, thereby restoring the balance between supply and demand, gradually bringing down prices and restoring market equilibrium. The overall impact on the industry will likely be negligible, the commenter suggests. GCATA states that variable curfews will be unworkable because operators will not be able to handle advance reservations without knowing if a corridor will be open or shut.

Papillon states that variable flight-free periods would be unacceptable because most air tour passengers must fly in the early or late part of the day and most book their flights 3 to 6 months in advance. The variable flight-free periods would eliminate approximately 80 percent of the flight revenue of operations originating at the GCNP Airport.

An individual from the Navajo Area Office of the BIA says that curfews could create negative impacts to all three Native American tribes in the GCNP vicinity and recommends a specific exemption to Native American tribes for any flights sanctioned by such Native American tribes over their own lands. Alternatively, if tribes' commercial operations are considered as governmental flights, they should be exempted from the SFAR restrictions.

The Sierra Club-Grand Canyon Chapter states that intrusive noise is particularly annoying during the morning and evening hours and that flight-free hours should not be considered a substitute for actual restoration of natural quiet. This commenter recommends flight-free months as well as flight-free periods that would coincide with engine-free raft periods on the river.

Another commenter states that curfew times should be adjusted monthly or on a seasonal basis, and that a time of 2 or 3 hours before sunset would be a better compromise, because tourists particularly enjoy the canyon rims and along the river in the late afternoon and evening light.

Two commenters recommend fixed curfews over variable curfews. Grand Canyon River Guides states that, since the variable curfews would require further data and analysis that could not be accomplished before the end of 1996, the proposed rule should focus on fixed curfews. NPCA believes that variable curfews will take too long to implement. If some tour operators opt for quiet technology while the monitoring is being conducted, it will skew the monitoring results and reward those operators that did not upgrade their equipment. NPCA still supports noise monitoring in consideration of possible curfews for the Comprehensive Noise Management Plan. The NPCA thus recommends the seasonal fixed curfew.

Papillon states that air tours originating in the east end of the canyon normally commence one hour after sunrise and terminate approximately one hour before sunset. The commenter states that present operations basically comply with the proposed fixed curfews and that for 6 months of the year, there are no flights for more than 80 percent of the time. Thus, Papillon recommends no fixed curfews for flights originating out of GCNP airport to the east end of the canyon.

FAA Response and Final Rule Action: The FAA agrees that curfews on the west end of GCNP might create a situation whereby large numbers of aircraft attempt to enter the air tour routes at the same time and along the same routes. Based on the FAA's safety analysis of the air tour flights originating from the Las Vegas area, the FAA has decided to exempt the routes beginning on the western end of the park from any curfew. This should eliminate any impacts on Native American tribes.

However, § 93.316(a) of the final rule prescribes a fixed curfew. Specifically, no person shall conduct commercial sightseeing operations within the Dragon and Zuni Corridors during the following periods. (1) Summer season (May 1–September 30)—6 p.m. to 8 a.m. daily; and (2) Winter season (October 1–April 30)—5 p.m. to 9 a.m. daily.

The FAA has determined that the curfew will increase natural quiet during sunset and sunrise in the most heavily visited portions of GCNP, in the eastern portion of the park. The NPS identified these areas as among the most sensitive parts of the park and these times as when visitors are especially sensitive to noise impacts. Consequently, the fixed curfew makes an important contribution to substantially restoring natural quiet on a daily basis and mitigating noise impacts on the experience of the park visitors in this portion of the Canyon.

This section of the final rule also responds to the President's Memorandum of April 22, 1996, charging the Secretary of Transportation to issue regulations for GCNP that immediately reduce noise and make further substantial progress toward the restoration of natural quiet, as defined by the Secretary of the Interior.

The FAA does not agree that the imposition of a curfew will unduly impact air traffic operations at Grand Canyon National Park Airport. The FAA believes that there are sufficient air traffic control (ATC) procedures to manage those aircraft operating to and from the Grand Canyon National Park Airport, as well as those aircraft transiting the Class D airspace area. These aircraft will continue to receive ATC service on a first-come-first-served basis and, if needed, traffic management procedures will be developed and instituted.

Cap on Commercial Sightseeing Operations

Proposed Cap

Proposed § 93.316(b) set forth a temporary moratorium on increased commercial sightseeing flights. The proposal limited each operator in 1997 and 1998 to the number of monthly operations equal to the monthly operations in the base year August 1, 1995, through July 31, 1996.

Comments on the Proposed Cap

GCATA states that basing the number of monthly operations on the period August 1, 1995, through July 31, 1996 may not work since some operators may have encountered a down year; rather an average of the last three years should be used.

Papillon, Twin Otter, and Grand Canyon Airlines state that capping flights regardless of type of aircraft would not provide an incentive to convert to quiet technology, and that caps should only apply to aircraft of conventional sound signature.

The NTSB says that the proposed caps are discussed almost exclusively from the perspective of aircraft noise. The NTSB says that the FAA must also analyze the possible safety impacts of the caps.

GCATC responds to the FAA's suggestions on measures to offset revenue losses from caps, i.e., using larger aircraft; raising commercial sightseeing tour prices; rescheduling flights; and diverting some aircraft to other revenue producing uses. GCATC says that the operations cap will provide no incentive for operators to invest in larger aircraft because it will prevent operators from recouping their investment in an economically feasible time period; operators are constrained in their ability to raise prices because the demand for GCNP air tour operators is relatively elastic; rescheduling flights

has no effect on increasing revenue when the number of flights an operator may fly is limited artificially by regulation; and air tour operators would already be using their aircraft for other purposes if it were economically worthwhile to do so.

A number of commenters (e.g., NPCA, Sierra Club-Grand Canyon Chapter, Wilderness Society, Grand Canyon Trust) say that basing the caps on the number of flights in 1995–96 will not restore the natural quiet and that the caps are too temporary. These commenters recommend that, since Congress identified the overflight problem in 1987, and the flight rate since then has dramatically increased, the FAA should use the 1987 operation levels to determine the caps. In addition, the maximum caps should be permanent. The Sierra Club-Grand Canyon Chapter and NPCA also recommend that the flight caps be in effect until completion and implementation of the comprehensive noise management plan.

Comments from the Grand Canyon Trust state the FAA's assumptions that any type of cap, whether it is on operators, aircraft, passengers, or air tours, will have identical effect is erroneous. Air tour operators can be expected to adjust their pricing structures, aircraft fleets, and tour offerings to maximize net operating revenues under whichever system of caps is adopted. Consequently, the commenter suggests that the actual economic cost of caps to the industry is likely to be small.

Grand Canyon River Guides says that since tour operators were mandated to report and pay for their use of airspace during the base year, those figures should be used by the NPS and the FAA to determine the allocation levels; operators who may have been avoiding user fees by underreporting their operations should not receive any special consideration. This commenter recommends that, once operational limitations are in place, the FAA should require that any new aircraft be quieter than those being replaced, and that, as this shift occurs, the number of aircraft should not be allowed to increase.

Kenai Helicopters proposes that any cap on air tour operators should grandfather the current operators, of whom many have made sizable investments in aircraft and facilities to meet the market demand. Many of these facilities are located on lands with long term (20–25 years) leases that necessitate long term operation potential to stay in business.

Heli USA states that since a large majority of the air carriers operating tours in GCNP are either new or have not reached the capacity of business to pay for their investment, caps based on historical records would be unfair.

Twin Otter and Grand Canyon Airlines state that setting operations caps raises serious administrative problems. For example, Twin Otter says that the "use or lose" rules which apply to air carrier slots would not work at the Grand Canyon since air tour schedules are seasonal and subject to revisions and cancellations for weather. This commenter says that the only fair alternative would be a slot market mechanism like that used to allocate restricted capacity at the High Density Rule airports.

FAA Response and Final Rule Action: In the final rule § 93.316(b) establishes a cap on commercial sightseeing aircraft that can operate in the SFRA. Specifically, this section states that no person may operate more commercial sightseeing aircraft in the Special Flight Rules Area than the highest number of aircraft that appeared on the certificate holder's operations specifications, and that were used for commercial sightseeing operations in the Grand Canyon Special Flight Rules Area, between July 31, 1996 and December 31, 1996.

NPS modeling suggested that between 1988 and 1994, that part of the park experiencing a substantial restoration of natural quiet declined from 43 to 31 percent. The modeling further suggested that by 2010 this area would decline to about only 10 percent of the park. Because the FAA and NPS concur that the best way to address the current erosion of natural quiet and achieve the substantial restoration of natural quiet is through reducing noise at the source (i.e. quieter aircraft), a cap is an interim measure needed to prevent a worsening of the situation prior to implementation of the noise limitations proposed in the NPRM published simultaneously with this final rule. The combination of the final rule and the noise limitations in the NPRM will make possible the substantial restoration of natural quiet mandated by Public Law 100–91.

This section of the final rule also responds to the President's Memorandum of April 22, 1996, charging the Secretary of Transportation to issue regulations for GCNP that place appropriate limits on sightseeing aircraft over GCNP to reduce the noise immediately and make further substantial progress toward restoration of natural quiet, as defined by the Secretary of Interior.

Section 93.317 Commercial Sightseeing Flight Reporting Requirements

Proposed § 93.317 established commercial sightseeing flight reporting requirements. As proposed, during the 5-year period following May 1, 1997, each certificate holder would submit, in a form and manner acceptable to the Administrator, three operational reports yearly to the Las Vegas FSDO. Each report would cover a 4-month period ending April 30, August 31, or December 31, and would be required to be submitted no later than 30 days after the reporting period closes. Certificate holders would be required to provide the aircraft identification number (registration number), departure airport, departure date and time, and route(s) for each operation flown in the SFRA.

Comments on Commercial Sightseeing Flight Reporting Requirements

Two operators state that the reporting requirements would be oppressive and burdensome, and the costs associated with this requirement would be passed on to air tour customers. One of these commenters recommends that if a report is necessary, it should only require date, departure point, and total number of operations by route.

Grand Canyon River Guides says that, compared with the paperwork already necessary to keep pilots and aircraft current, the additional burden of recordkeeping in Notice 96–11 is minor, particularly since operators probably already are keeping track of such things.

FAA Response and Final Rule Action: Commercial tour operators were required by SFAR 50–1 to obtain a Part 135 air carrier operating certificate. The existing reporting requirements under Part 135 for operators using multiengine aircraft would capture the information required by this rule. The FAA believes that any recordkeeping burden imposed by this rule will be minor and related to copying the information into an FAA format. The required information is needed to provide accurate information on GCNP overflights for noise and safety management purposes, to help validate noise models, to determine where noise mitigation is needed, and to provide the basis for more flexible noise management system. The recordkeeping requirements in the final rule therefore are as proposed.

Environmental Review

The FAA conducted an abbreviated scoping process and prepared a Draft Environmental Assessment (EA) for the proposed rule to assure conformance with the National Environmental Policy

Act of 1969 and all applicable environmental laws. Copies of the Draft EA were circulated to interested parties and placed in the Docket, where it was available for review. The Notice of Availability of the Draft EA was issued on August 21, 1996. The original 45-day comment period, which was scheduled to close on October 4, was extended until November 18, 1996. Based upon the Draft EA and careful review of the public comments, the FAA has determined that a finding of no significant impact (FONSI) is warranted. The final EA and the FONSI were issued on December 24, 1996. Copies have been placed in the public docket for this rulemaking, have been circulated to interested parties, and may be inspected at the same time and location as the final rule.

This final rule constitutes final agency action under 49 U.S.C. 46110. Any party to this proceeding, having a substantial interest may appeal the order to the courts of appeals of the United States or the United States Court of Appeals for the District of Columbia upon petition, filed within 60 days after entry of this Order.

Regulatory Evaluation Summary

Any changes to Federal regulations must undergo several economic analyses. First, Executive Order 12866 directs that each Federal agency shall propose or adopt a regulation only upon a reasoned determination that the benefits of the intended regulation justify its costs. Second, the Regulatory Flexibility Act of 1980 requires agencies to analyze the economic effect of regulatory changes on small entities. Third, the Office of Management and Budget directs agencies to assess the effect of regulatory changes on international trade. A regulatory evaluation of the proposal is in the docket.

In conducting these analyses, the FAA has determined that this Final Rule will be "a significant regulatory action" as defined in the Executive Order and the Department of Transportation Regulatory Policies and Procedures. However, this rule will not have a significant impact on a substantial number of small entities.

The final rulemaking will not have a significant impact on international trade. There may be some increase in the U.S. balance-of-payments account as a result of a decrease in foreign expenditures on GCNP tours.

Introduction

To assist the NPS effort to measure aircraft noise levels in GCNP, the Las Vegas Flight Standards District Office (FSDO) conducted a field survey of all operators certificated to provide commercial sightseeing air tours within the GCNP SFRA. The Las Vegas FSDO SFAR No. 50–2 Air Tour Route Usage Report (field survey) detailed information for each operator with regard to the number of operations conducted along each commercial sightseeing air tour route within the GCNP SFRA. This information was further broken down for each type of commercial air tour sightseeing aircraft in the operator's fleet that operated along these routes during the most recent 3 years through early October, 1995. With the exception of the "Blue Direct South" and certain "Brown" routes for fixed wing aircraft and the "Green 3" and "Green 3A" routes for helicopters, all routes identified in the Grand Canyon VFR Aeronautical Chart were identified by GCNP commercial air tour sightseeing operators as routes flown.

To determine the different kinds of commercial sightseeing air tours as well as to estimate the total number of commercial sightseeing air tours, commercial air tour sightseeing passengers, and commercial air tour sightseeing revenue for GCNP, the FAA, utilizing known passenger seating capacities of each type of aircraft used by GCNP commercial air tour sightseeing operators, cross referenced the Las Vegas FSDO field survey detail with tour and cost information as provided in Grand Canyon commercial air tour sightseeing brochures. The estimates derived from this cross referencing form the basis from which the FAA developed the cost estimates for this final rulemaking.

Response to Comments on the Original Regulatory Evaluation

The FAA held public meetings in September 1996 at Scottsdale, AZ and Las Vegas, NV where additional comments were offered and later submitted to the docket. These comments have also been included in the following discussion.

In addition to the individual comments, the FAA received approximately 60 comments from industry and tourism associations (e.g., the Grand Canyon Air Tour Council, Grand Canyon Air Tourism Association, National Air Transportation Association, and the United States Air Tour Association); environmental groups (e.g., Grand Canyon Trust and the Sierra Club); major GCNP air tour operators; certain Federal Agencies (National Park Service, Small Business Administration); and Indian Tribes (Hualapai and Havasupai). Some of the more substantive comments also include commissioned studies in support of their position. Many of the comments with more substantive economic and analytical content however, were also offered by the associations and operators as testimony at the public hearings, and are summarizes below. A full summary of all the comments can be found in the Preamble.

Typically, the comments from GCNP air tour operators and associated trade associations emphasized the negative economic impact the FAA NPRM would have on the overall GCNP air tour industry. Of particular note, several commenters took exception to the FAA assumption that GCNP air tour operators' capital and labor resources were relatively mobile, i.e., the GCNP air tour operator could readily relocate his business to another area of the United States. This concept unfortunately, was poorly worded and misconstrued. The FAA has some information that some commercial air tour sightseeing operators, SFAR 50–2 Tour Route Usage Report, reported such a small volume of commercial air tour sightseeing operations in GCNP as to indicate that the conducting of commercial sightseeing air tours in GCNP was only a part of their overall business. The implication was intended to convey mobility between the operators' GCNP commercial sightseeing air tours and their operations in other non-GCNP commercial air tour sightseeing ventures, presumably while remaining within the GCNP environs. It was not intended to suggest that GCNP operators in general, or in total, could simply start up their commercial air tour sightseeing ventures elsewhere in the United States. The FAA has refined this assumption in the final regulatory evaluation.

Comments were received with regard to certain general economic issues such as (1) locality or market differentiation (e.g., the Las Vegas/Southern Nevada economy as compared with the Tusayan/Northern Arizona economy); (2) the "trickle-down" or multiplier effect; and (3) the internationalism of GCNP tourism. Several commenters note that the NPRM neglected to take into consideration that the majority of the growth associated with GCNP commercial sightseeing air tours derives from the significant growth of Las Vegas, and that the West and East ends of GCNP are analytically distinguishable. The FAA notes that the growth rate utilized in the NPRM regulatory evaluation was derived from a composite of the tower operations of four Las Vegas vicinity airports and

those of Tusayan as reported in the 1994 Tower Activity Forecast (TAF). The compound annual rate of growth of 3.3 percent, therefore, accounts for the different rates of growth at the West and East ends of GCNP. The FAA believes this growth rate is representative of the growth rate of GCNP. Nevertheless, the FAA has incorporated the concept of different rates of growth between the West-end and the East-end in the final rule.

With regard to the concept of the "trickle-down" or multiplier effects of this rule, the Western States Coalition states that the air tour industry is very important to the rural economies of the states surrounding the Grand Canyon and asks the FAA not to further restrict flights in the canyon. Cruise America, Inc., notes that the negative economic impact will trickle down from a reduction in passengers visiting the canyon to a reduction in income for local populations surviving off tourism revenue. Additionally, bus tour companies and European travel wholesalers would be forced to reroute their organized tours, resulting in a detrimental effect of inbound tourism to America, and the efforts of private air carriers who promote North America via operations in the Canyon would also be hurt.

The Grand Canyon Air Tourism Association (GCATA) states that Northern Arizona and its small towns along Rt. 40 are very dependent on the tourist trade, and that any regulation that will have an adverse economic impact or cost an American his or her job must be taken only when there is overwhelming and compelling evidence to support the action. (Air Star Helicopters states that the NPRM would create a loss of pilot and administrative jobs; decrease aircraft, parts and fuel sales; and cause an unnecessary loss of tax revenue). GCATA further notes that the air tour industry is a viable business, both in Las Vegas and Arizona, and contributes an annual input of approximately $250 million. The commenter concludes with the example of Eagle Airlines, a GCNP commercial air tour sightseeing operator located in Las Vegas which currently is building a $40 million dollar complex which will include a Grand Canyon terminal and hanger/office facilities for several operators.

The Grand Canyon Air Tour Council (GCATC) cites the same $250 million revenue base, noting that 1,400 direct jobs are involved, and criticizes the FAA economic impact numbers as seriously understated. GCATC references a study being conducted by the University of Nevada at Las Vegas (UNLV), Center for Business and Economic Research, as support for this position. The draft UNLV study in its submission entitled "The Economic Impact of the Nevada Air Tour Industry: Work-to-Date" estimates an economic impact of the air tour operators to the Grand Canyon on the Clark County (Las Vegas) economy as in excess of $500 million, assuming a loss of 436,925 visitors expected to travel from Las Vegas by air to visit the Grand Canyon in 1996. Clark County air tour operators alone could be expected to lose revenue in the range of $81 million to $117 million, and non-aviation losses were estimated to be in excess of $400 million. Extensive detail of the individual components making up the indirect economic impact, inclusive of individually calculated multipliers for each impact, was also submitted.

In the full regulatory evaluation accompanying the NPRM, the FAA states that its cost estimates and economic analysis are limited to the direct economic impacts on commercial sightseeing air tour operators and customers. The FAA also clearly identifies the generally accepted multiplier of 2.5 in its discussions of costs. The FAA appreciates the detailed information provided by UNLV in its preliminary findings. However, the UNLV results are predicated on the following two somewhat dire assumptions: (1) All Las Vegas GCNP commercial air tour sightseeing operations will cease as a result of this rulemaking; and (2) all Las Vegas tourists who planned to take an air tour of the Canyon as part of their visit to Las Vegas will no longer come to Las Vegas. Furthermore, by incorporating unadjusted input-output coefficients as the individual multiplier factors used to assess the economic impact of this rulemaking, a chain of double counting was introduced that resulted in a total impact far in excess of even the most severe predictions offered in other comments.

Comments were received regarding the importance of foreign commercial air tour sightseeing passengers and foreign tour dollars. The United States Air Tour Association (USA) included statistics indicating that foreign air tour passengers constitute 60 percent of all air tour passenger in the United States. Other commenters estimate a higher percentage of foreign air tour passengers to GCNP, and Heli USA notes that the Grand Canyon is the major reason most international visitors come to Las Vegas. The foreign tourist as a group averages a two-night stay in Las Vegas spending millions of dollars yearly in hotels, restaurants, casinos, and shops.

A representative of Cruise America, Inc., specializing in the rental and sale of recreational vehicles, draws a clear distinction between the Japanese and other Asian tourists who typically travel in large tour groups and German and other European tourists who tend to travel as small family groups and are referred to as "RV Travelers". The former group make up the majority of foreign tourists flying commercial sightseeing air tours out of Las Vegas most of which connect with bus tours of the South Rim; the latter group tend to drive to the Canyon and take the commercial sightseeing air tours originating out of Tusayan. With both groups, the majority typically advance book (or reserve) their activities 3–6 months in advance, and the commenter notes that the inability to pre-reserve the Grand Canyon portion of their trip could potentially remove Arizona and/or Nevada from their planned tour. The FAA appreciates the additional information regarding international tourism to GCNP.

To a lesser extent, commenters also addressed the importance of providing the opportunity to view the Canyon to the physically challenged and otherwise physically unfit to hike, raft or even access the viewer areas of the South Rim. The generally held estimate of the proportion of physically challenged commercial air tour sightseeing passengers is 20 percent or more (Eagle Canyon Airlines). Papillon, however, suggests that while the real estimate of physically challenged commercial air tour sightseeing passengers is closer to 3 percent, a more notable statistic is that fully 80 percent of commercial air tour sightseeing passengers are physically unfit to see the Canyon in any other manner, including the visitor viewing areas of the South Rim. The FAA noted the physically challenged passengers constitute a significant portion of GCNP commercial air tour sightseeing passengers in its NPRM assessment.

Comments addressing the economic impact of the rulemaking on the Native American tribes of the GCNP area were also received by the FAA. Heli USA notes that the combined helicopter industry of Las Vegas yearly pays around $360,000 to the Hualapai Tribe for landing rights in conjunction with the popular commercial sightseeing air tours out of Las Vegas using the Green 4 tour route which also includes the Hualapai River Runners white water rafting program. The commenter also notes that new programs are being introduced with the River Runners and Heli programs with Grand Canyon West which could gross revenues in excess of $1 million in the forthcoming year.

Comments of the Havasupai Tribe also address the economic impact of lost revenue if the tours conducted along the Green 3 helicopter tour route (Papillon) are impacted by the rulemaking. The Havasupai also note that the current change in the Blue 1 commercial sightseeing air tour route resulting from the merging of the Toroweap/Shinumo Flight-free Zone could have serious adverse affects on Havasupai lands as a prominent tourist attraction. Other issues concerning the impact of this rulemaking on Native American Tribes and their properties are addressed elsewhere in the final rule.

The FAA also received comments regarding the business operations of the commercial air tour sightseeing industry. Alan R. Stephen, President of Twin Otter International (TOIL) on behalf of Grand Canyon Airlines (GCA) states that the FAA's economic analysis demonstrates little understanding of business decision-making. The commenter notes that profits rather than revenues normally drive business investment decisions, and that the relationship between retained earnings (profits) and changes in revenue is best described by the 80–20 principle—a 20 percent reduction in revenue results in an 80 percent reduction in profits. The commenter adds that these profits are highly leveraged by load factor, e.g., operating costs are the same regardless of the number of commercial air tour sightseeing passengers on a tour and the revenue per passenger (ticket price) over break-even constitutes the bottom line profit. (The commenter does not indicate what the minimum break-even number of passengers per commercial sightseeing air tour is). Finally, the commenter notes the high capital intensity of airlines such as Grand Canyon Airlines (GCA), and GCA investment in facilities and equipment is the same regardless of the percentage of its air tour potential is actually flown. GCA also notes increased utilization as the single most important incentive for operators to invest in quiet aircraft technologies.

Further comments on commercial air tour sightseeing profitability were offered by Papillon Grand Canyon Helicopters which notes that the industry is economically fragile and capital intensive, and must stay fully staffed even during the slow season. The result is a significant loss to be overcome at the beginning of each tourist season. The commenter estimates there are 30 to 45 days of potential profit for the year's work and to operate successfully in the aviation business requires optimum utilization of aircraft.

Another determining factor of profitability cited in the comments is the number of commercial sightseeing air tours that can be conducted in a given day. Comments were submitted in reference to the serious potential economic consequences of placing curfews on commercial sightseeing air tours. Heli USA, which offers Las Vegas originating helicopter tours along the Green 4 tour route, states that at least four round trips (turns) must be flown per day per helicopter to enable a company to be financially stable, let alone profitable.

Sundance helicopters, which also offers Las Vegas originating helicopter tours along the Green 4 tour route, confirms four trips as the break-even level of daily operations per helicopter and cites the obvious consequence of the NPRM curfew eliminating the day's final (5 p.m.) commercial sightseeing air tour. Air Vegas Airlines, which flies Beech C–99 (15-seat) fixed-wing aircraft commercial sightseeing air tours along the Blue 1 commercial sightseeing air tour route, indicates that approximately 25 percent of the Air Vegas total revenue is generated by its 7:30 a.m. departure from Las Vegas; elimination of this tour would result in annual revenue losses of approximately $4 million. Air Vegas Airlines also notes that it has invested in excess of $10 million in its fleet of Beech C–99 aircraft and a minimum average of three revenue trips per day is necessary to amortize the acquisition costs.

The FAA appreciates all comments regarding the derivation of business profits for GCNP commercial sightseeing air tour operators. Without accessibility to individual operators' books, the FAA relied on operating revenue, and, to a lesser extent, net operating revenues, and the concomitant changes therein, as proxies for changes in the profitability of commercial air tour sightseeing operations.

Travel time, or its alteration from current practices, was also cited by commenters as a contributing cost of this rulemaking. McCarran International Airport (Las Vegas), through a commissioned study, developed an airspace simulation analysis to estimate the potential effects of the NPRM on aircraft delays, travel times, and operating costs. According to the study, the major contributing factor to increased aircraft delays is contained in the NPRM curfews which will result in higher demand during already congested peak hours at Grand Canyon Airport. The variable curfew would have a much more significant effect on aircraft delays (as much as 4 to 6 minutes per aircraft operation) than the fixed curfew (up to 2 minutes per operation). Some of these delays could be reduced to about one minute per operation (or less) by changing air tour operating strategies to fly non-curfew affected routes during curfew periods. It is not known if flying non-curfew routes would be a viable option for an operator. Air Vegas Airlines comments that the average time to fly the Blue 1 route from Las Vegas to Tusayan takes about 55 minutes; the return on the Blue Direct passenger route requires about 45 minutes.

The rerouting of aircraft onto modified air tour routes results in increases in aircraft travel time of approximately 1 to 2 minutes per aircraft operation depending on the air tour routing alternatives implemented. The operating cost penalty includes the costs of both increased travel times and increased aircraft delays. GCATC adds that, even if some operators could adapt to the new restriction, neither the FAA nor the GCATC has any reason to believe that passengers would be willing to pay more to fly over tightly restricted (and therefore, less desirable) routes. TOIL/GCA note that restricting the Zuni Corridor to one-way traffic would eliminate GCA's important east Canyon air tour (Black 1) which is flown when poor weather conditions otherwise preclude operating GCA's primary "Grand Discovery" air tour, which flies up the Zuni, over the north rim, and back down the Dragon Corridor. (This was also alluded to at the Las Vegas portion of the public meetings by Papillon Grand Canyon Helicopters which notes that the restrictions placed on the Zuni Corridor with a fly-out to the NE over the Painted Desert, provides about 9 minutes of Canyon viewing for a 50-minute Grand Canyon air tour). Finally, TOIL/GCA indicates that with the extension of the Bright Angel Flight-Free Zone to the GCNP boundary, the distance of the Grand Discovery air tour is lengthened by about 20 percent and, therefore, would increase GCA's operating costs by a corresponding 20 percent.

The FAA appreciates the comments relating to curfews and their impact on travel times and alternate tour options. The FAA has taken these comments into consideration from a safety aspect, and refined certain of its originally proposed changes to flight corridors and flight-free zones.

Another major issue raised in the comments received by the FAA concerns the adoption of quiet technology as an alternative means to restore natural quiet. While this issue is addressed elsewhere in the final rule, certain costs associated with this option

are noted. In general, according to TOIL/GCA comments, "quiet" aircraft models tend to be larger in passenger seating capacity than the conventional aircraft they replace and also more expensive. With regard to fixed-wing aircraft, TOIL/GCA identified the Cessna-208 Caravan (9 passenger seats) and the deHaviland DHC–6–300 Vistaliner (19 passenger seats) as the primary quiet replacements for the current, predominately flown Cessna C–207 (6 passenger seats) and C–402/Piper Navajo (9 passenger seats). However, the cost of a new Caravan is approximately $1.3 million and about $1.4 million to purchase a DHC–6–300 Twin Otter, convert and refurbish to the Vistaliner configuration. Alternatively, TOIL/GCA suggests that twelve Cessna C–207's or nine C–402/Piper Navajos could be purchased for the price of one Caravan or one Vistaliner. Scenic Airlines, Inc., offers corresponding prices for the Cessna C–208 Caravan and C–402/Piper Navajo of $1.25 million and $200,000, respectively. Air Vegas Airlines, which operates a fleet of Beech C–99 turbo-props (15 passenger seats), notes that the Beech C–99 is a faster aircraft than most currently operating in the Canyon and that its power settings could be set to reduce noise.

With regard to helicopters, Papillon Grand Canyon Helicopters notes that only the McDonnell Douglas MD500 (MD 520–N, or NOTAR) is certified and qualifies as a "quiet" aircraft. However, Heli USA comments that the NOTAR cannot even perform; tests at the Canyon showed it could only carry 3 passengers on a hot day (the MD 520–N is designed for 4 passengers). This was confirmed by Air Star Helicopters, Inc. which had attempted to operate the MD 520–N as part of its commercial air tour sightseeing fleet. Papillon Grand Canyon Helicopters and McDonnell Douglas both note that McDonnell Douglas has developed the MD600 (6/7 passenger seats) which meets the criteria for quiet aircraft and will be available for delivery in early 1997. (Papillon has one on order and Air Star Helicopters has two on order, all of which are scheduled for delivery in 1997.) The MD600 costs between $1.25 million and $1.5 million depending on cost items over base. Finally, Papillon Grand Canyon Helicopters also notes in its comments that they are developing a 9-passenger seat helicopter (Whisper Jet S55–QT) which is equally as quiet as the MD600 and costs approximately the same making it about 50 percent more cost efficient than the MD600 because of its expanded seating capacity. Delivery of these aircraft are expected within the forthcoming year.

The FAA appreciates the expanded information on "quiet technology" aircraft provided by the commenters, all of whom have taken an advocacy position for these type of aircraft with respect to GCNP commercial sightseeing air tours. The FAA notes, however, that all commenters in support of "quiet technology" aircraft either currently maintain fleets, made up of "quieter aircraft" or are in the process of taking delivery on new quiet aircraft within the year. Quiet technology is addressed elsewhere in this final rule and is the subject of a concurrent Notice of Proposed Rulemaking effort underway.

The above summary of comments reflect the economic issues arising more often from the commenters; the FAA also received occasional comment addressing other economic concerns, as well. Comments by the Office of Advocacy of the Small Business Administration (SBA) on the Regulatory Flexibility Analysis (RFA) challenge the initial RFA findings on the impact on small tour operators because revenue losses were assessed at the aggregate level. The SBA also suggests that a different compliance and reporting requirement or timetables for small entities should be explored, possibly even an exemption from these parts of the rule. Air Vegas Airlines also notes the added cost associated with the training (retraining) of pilots which will be required as a result of the elimination or restructuring of present routes; the commenter uses an example to illustrate his point which suggests that training costs will be burdensome.

The FAA has carefully reviewed the SBA comment and, based on the data available, has analyzed the regulatory flexibility impact using reasonable assumptions—including analyzing revenue losses at the aggregate level. Different compliance and reporting requirements for the smaller entities were also considered.

The SBA had suggested that it would be appropriate to use elasticity of demand information to calculate the extent to which small businesses will recoup costs by increasing fares. The data for this segment of the population, however, are not available. In another example, the SBA had suggested that the FAA evaluate data on profits which "may be available from Dun and Bradstreet." Data on profits from very small entities that would be affected by this proposal are also not available from the recommended source or within the public docket. The SBA also believes that the FAA has not fully addressed significant options for consideration. Given both the qualitative and quantitative costs and benefits, the FAA believes that the best option that minimizes costs and maximizes benefits was chosen. With regard to other concerns made by the SBA and Air Vegas Airlines, the FAA has taken these comments into consideration in producing the final RFA and in estimating costs associated with this rulemaking. (See the accompanying Regulatory Flexibility Analysis for a more complete discussion regarding the alternatives considered to reduce the cost impact of this rulemaking on small entities.)

Costs

The total cost impact of this rulemaking will depend to a large extent on the response to the changes on the part of commercial air tour sightseeing operators. Under a worst case scenario, GCNP commercial air tour sightseeing operators directly impacted by the reconfiguration of the GCNP SFRA could cease commercial air tour sightseeing operations altogether in the Canyon; this essentially would mean the complete elimination of the GCNP commercial air tour sightseeing industry. However, it is expected that the affected commercial air tour sightseeing operators will adapt to the modified routes resulting from the new GCNP SFRA changes by redesigning or offering new commercial sightseeing air tours. The estimated cost impact of the adjustments suggests a continued viable commercial air tour sightseeing industry.

With regard to the consumers of commercial sightseeing air tours, the altered commercial air tour sightseeing routes resulting from the new changes to the GCNP SFRA, will, in some instances, shorten the length of a commercial sightseeing air tour currently offered. In other instances, it will prolong the time a commercial air tour sightseeing passenger spends on a commercial sightseeing air tour, but it will not necessarily prolong the time available to the passenger to view the more prominent features of the Grand Canyon. In still other instances, it will eliminate the most prominent feature of the commercial sightseeing tour. Certain redesigned commercial sightseeing air tours are likely to increase in price to cover the commercial air tour sightseeing operator's added operating costs.

To the extent a commercial sightseeing air tour of GCNP is perceived to be a devaluation in the current service offered, or its value is perceived to be less than its price, commercial air tour sightseeing could be

impacted adversely. However, consumption of goods and services such as commercial sightseeing air tours are typically one-time only events and not repeated by the same consumer. Therefore, the tourist is more likely to be concerned with the current commercial air tour sightseeing offering, and not its perceived loss of value in comparison to previous years.

The preceding paragraph relates to the concept of consumer surplus and the perceived loss thereof. Inherently, there will be a loss of consumer surplus when currently existing GCNP commercial sightseeing air tours are degraded as in the case of eliminating the National Canyon portion of what the FAA refers to as the "Blue 1, Blue Direct" tour. Similarly, with the Zuni Point Corridor becoming one-way, consumers taking an abridged commercial sightseeing air tour which substitutes the Painted Desert to the east of the Canyon for the lost viewing minutes of the Canyon itself, will likely also experience some loss of satisfaction. The FAA, however, is unable to quantitatively estimate these losses in consumer surplus because no consumer surplus valuation of commercial sightseeing air tours is available, and the comparison of the consumer surplus derived from slightly different goods among different individuals (e.g., interpersonal comparisons) can be very misleading. Thus, the FAA is only able to discuss the consumer losses associated with this rulemaking in general terms.

In this analysis, the FAA has assumed that commercial air tour sightseeing operators could recover any increase in operating cost due to this rulemaking by charging their customer more for air tours of GCNP. In fact, it may not always be possible for these operators to recover all the cost increases imposed on them by this rulemaking by raising prices of air tours. Customers are sensitive, in varying degrees, to price increases and react by buying less of those goods and services when their prices are increased. Customers tend to be insensitive to very small increases in prices on goods and services that are infrequently purchased (a one cent increase on the price of a new car is not likely to have any impact on any potential customer's purchasing behavior). Buyers do tend to be very sensitive to large increases on goods and services that are frequently purchased (a one dollar increase in the price of a gallon of milk will result in people buying less milk). At this time, the FAA does not have adequate data to estimate how sensitive customers are to noticeable price increases for air tours of the Grand Canyon. However, the FAA believes that commercial air tour sightseeing operators will be able to recover most of the increased costs imposed by this rule, because the price increases will usually be relatively small (compared to the price of a air tour) so that most potential customers will continue to purchase air tours of the Grand Canyon.

The following discusses the potential cost impact of each change:

(1) Modification of the Special Flight Rules Area (SFRA)

The extension of the GCNP SFRA, which effectively increases the lateral dimensions of the existing SFRA by approximately 2.8 percent, will result in only those costs associated with revising and publishing a new Grand Canyon VFR Aeronautical Chart. Similarly, the increase in altitude of the SFRA ceiling from 14,499 to 17,999 feet msl, which is intended to protect GCNP from the impact of commercial air tour sightseeing aircraft overflying the flight-free zones, will have minimal impact on GCNP commercial air tour sightseeing operators. Its cost will be included under the revision and publishing costs noted above. The FAA considers chart revision to be a part of normal, on-going administrative costs, not costs incurred as a result of this rulemaking action. Neither the chart revision nor the cost associated with a change in altitude over the flight-free zone will have a measurable impact on GCNP commercial air tour sightseeing operators.

(2&3) Modification of existing and establishment of new flight-free zones and flight corridors

The reconfiguration of GCNP flight-free zones and flight corridors will impact all commercial air tour sightseeing routes, and consequently, all revenue ($113.1 million) received by the GCNP commercial air tour sightseeing industry. Approximately $92.5 million, or about 82 percent, of the total revenue generated by the GCNP commercial air tour sightseeing industry is derived from the commercial sightseeing air tours offered on the "Blue 1" tour route. The FAA estimates that the cost impact associated with the elimination of the National Canyon portion of this tour route will be about $2.4 million average annual reduction in net operating revenue (1997–2008) with a likely greater loss of consumer surplus. There will also be some further reduction in net operating revenue associated with the remaining $20.6 million in total commercial air tour sightseeing revenue; most of this will result from the change to one-way traffic in the Zuni Corridor.

A more detailed breakdown of the commercial sightseeing air tour routes effected by this change and an assessment of the potential losses are as follows:

Toroweap/Shinumo Flight-free Zone

(a) The merging of the Toroweap-Thunder River and Shinumo Flight-free Zones and the resulting closing of the Fossil Canyon Corridor will eliminate tour routes "Blue 1A", "Brown 1A", and "Green 3A". In response to the Las Vegas FSDO SFAR 50–2 Tour Route Usage Report, no operators indicated use of the "Green 3A" route, only one operator reported use of the "Brown 1A" route and four operators reported use of the "Blue 1A" route. The merging of the two flight-free zones and resulting elimination of the Fossil Canyon Corridor will only impact the tour offerings of these five operators, only one of which, however, utilizes a single aircraft and offers only the one type of tour in GCNP.

All of these commercial sightseeing air tour packages are part of a larger group designated as "miscellaneous" tours; collectively, they generated total commercial air tour sightseeing revenues of approximately $724,000 in 1995 by providing approximately 1200 tours that carried 6,500 passengers. However, only the one single tour/single aircraft operator with 1995 annual revenue of approximately $9,000 (the forecast annual average for the 12 year period 1997–2008, is $11,500) will be required to develop and competitively offer a completely new tour. The other four operators can readily modify their current tour packages with minimal cost outlay because they already offer established commercial sightseeing air tours along other similar routes.

The single tour/single aircraft operation likely provides transportation to river rafting tours, a "tour" endeavor which can be modified. The only alternative for this operator is elimination as a GCNP commercial air tour sightseeing operator concomitant with the loss of an average annual revenue stream of $11,500 over the 1997–2008 time frame. However, the FAA believes that if this particular operator was unable to adapt, his tour business will not be lost, but rather it will be taken over by another similar operator. Thus, the FAA estimates the cost of this change will be zero revenue loss, but possibly, will lead to the elimination of a single commercial air tour sightseeing operator doing a relatively small amount of business in GCNP.

(b) The southward extension of the Toroweap-Thunder River Flight-free

Zone and concomitant elimination of commercial air tour sightseeing access to the National Canyon portion of what is referred to as the "Blue 1, Blue Direct" commercial sightseeing air tour will result in an estimated average annual reduction of net operating revenue in excess of $2.4 million from 1997 through 2008. The source of this revenue loss is the anticipated reduction in ticket prices. Reduced ticket prices can be expected because commercial air tour sightseeing operators will no longer be offering an aerial tour of the Grand Canyon. Instead they will merely offer a commuter flight to Tusayan as a result of being precluded from offering the National Canyon aerial portion of their former commercial sightseeing air tour.

The estimated average annual reduction in net operating revenue of $2.4 million was derived by subtracting the estimated reduction of $2.5 million in average annual variable operating costs from a total average annual revenue loss of $4.9 million.

Bright Angel Flight-Free Zone

(a) In 1995, according to the SFAR No. 50–2 Air Tour Route Usage Report, 13 operators (fixed-wing aircraft and helicopter) with total revenues of approximately $9.3 million conducted commercial sightseeing air tours along the "Black 1, 1A" and the "Green 1, 1A, 2" tour routes and another five operators with total revenue of approximately $1.4 million conducted helicopter commercial sightseeing air tours in the Dragon Corridor. The total 1995 revenue potentially impacted by this part of the rule is estimated to be about $10.7. The FAA estimates, however, that the average annual increase in variable operating costs resulting from an approximate 20 percent increase in duration of the commercial sightseeing air tours operating on the "Green 1, 1A & 2" will be offset by increased ticket prices. Thus, the FAA estimates no net operating losses associated with the north extension of the Bright Angel Flight-free Zone.

(b) The reconfiguration of the Zuni Point Corridor and the limiting of it to one-way traffic will impact all commercial sightseeing air tours that depend on the current two-way VFR routes to offer a simple fly around type tour of the Zuni Point Corridor. This includes one fixed-wing aircraft and four helicopter GCNP commercial air tour sightseeing operators. The fixed-wing aircraft operator generated commercial air tour sightseeing revenue of approximately $13,000 from this particular tour in 1995, a tour part of the larger group of "miscellaneous" tours. The substitutes for this operator will be the "Black 1, 1A" tour route or flying out to the east over the Painted Desert as a tour route option. Both of these tour route options are expected to increase the tour price by about $10 per passenger, or about $2,600 total annual added cost to the commercial air tour sightseeing consumers based on 260 passengers opting for this tour in 1995.

The four helicopter operators generated 1995 commercial air tour sightseeing revenue of just under $1.5 million flying the "Green 1" commercial air tour sightseeing route in conducting over 3,700 commercial sightseeing air tours with more than 12,800 passengers. Similar options are also available to GCNP commercial air tour sightseeing helicopter operators, i.e., the "Green 1, 1A & 2" ("Zuni Point NW") tour route or the Painted Desert tour route option. Each of these will increase the tour price per passenger by about $45 or $574,400 total annual added cost to the commercial air tour sightseeing consumers based on the 12,800 passengers opting for this tour in 1995.

The total potential increase in 1995 annual costs of this particular alteration in the GCNP SFRA will be about $577,000 ($2,600 plus $574,400) in added consumer costs (increased commercial air tour sightseeing prices) because of the elimination of less costly commercial air tour sightseeing options. The forecast annual average cost for the 12 year period 1997–2008, is just over $740,700 per year. However, adaptation on the part of commercial air tour sightseeing operators to the changes in the Zuni Point Corridor could result in the possible addition of one commercial air tour sightseeing flight per hour through the Dragon Corridor. This will be the outcome if the five affected operators choose the "Zuni Point NW" option as their commercial air tour sightseeing substitute.

There is another cost associated with the one-way limitation of the Zuni Point Corridor in conjunction with the north expansion of the Bright Angel Flight-free Zone. The ticket price increases resulting in added consumer costs detailed above do not fully cover the increase in variable operating costs of the commercial air tour sightseeing operators adopting the new Zuni-Alpha-Dragon Corridors loop. The five new operators of this kind of tour are limited to raising their tour prices to only what is currently being charged the tour consumer by the already established commercial air tour sightseeing operators of this kind of tour. This is captured in the price increases of $10 and $45 for fixed-wing aircraft and helicopter tours, respectively. The difference between what these operators could receive in additional revenue through price increases and the added costs imposed by this rule will result in about $383,000 that the operators must absorb as losses in increased aircraft operating costs. Thus, the full cost of making the Zuni Point Corridor one-way with the north expansion of the Bright Angel Flight-free Zone is $577,000 in increased consumer costs and $383,000 in operator losses.

As previously discussed, while the FAA does not have adequate data to estimate how sensitive customers are to noticeable price increases for air tours of the Grand Canyon, the FAA does believe that commercial air tour sightseeing operators will be able to recover most of the increased costs imposed by this rule, because the price increases will usually be relative small (compared to the price of a air tour) so that most potential customers will continue to purchase air tours of the Grand Canyon. A $10 price increase a relatively small price increase probably will not have a noticeable impact demand for above fixed wing air tours. However, a $45 price increase is a large price increase and could result in a reduction in the demand for the above helicopter air tours. Therefore, the above the estimate for increased revenue from price increases ($577,000) may be an over estimate, and the estimated loss ($383,000) may be an under estimate.

Sanup Flight-free Zone

The creation of the Sanup Flight-free Zone in the southwest portion of GCNP restricts air traffic to one side only of the Colorado River beyond Separation Canyon. This change will effect seven fixed-wing aircraft operators offering commercial sightseeing air tours on the "Blue 2" VFR route and three helicopter operators offering commercial sightseeing air tours on the "Green 4" VFR route. Combined, these 10 GCNP commercial air tour sightseeing operators accounted for approximately $7.7 million total commercial air tour sightseeing revenue in 1995, flying approximately 16,800 commercial sightseeing air tours and 92,800 passengers.

Based on information from the Las Vegas FSDO, 90 percent of GCNP commercial sightseeing air tours conducted on the "Blue 2" and the "Green 4" VFR commercial air tour sightseeing routes turn back at or before Separation Canyon and will therefore, not be directly impacted by this change. Furthermore, there is no evidence to suggest that the remaining 10 percent of the commercial sightseeing air tours that fly beyond Separation Canyon charge a

premium which would result in proportionately greater potential revenue losses. Nor is there substantiated evidence to suggest that the helicopter tours that include ground excursions inside the Hualapai Indian Reservation (a major source of revenue for this Native American tribe derived from landing rights agreements contracted with commercial air tour sightseeing operators) will be impacted because these tours typically extend only as far as Quartermaster Canyon, a point located west of Separation Canyon. The FAA therefore, concludes that this alteration to the GCNP SFRA will have neither a measurable impact on the 10 percent of commercial sightseeing air tours that fly beyond Separation Canyon nor any significant probable loss of consumer surplus.

Desert View Flight-free Zone

No commercial sightseeing air tours are currently conducted in the vicinity of the Desert View Flight-free Zone such that its extension to the north and east will have a direct cost impact on the GCNP commercial air tour sightseeing operators or their passengers. Costs associated with the elongation of the Zuni Point Corridor as a result of the simultaneous extensions of both the Desert View and Bright Angel Flight-free Zones have already been accounted for. Likewise, the costs have been discussed which might be associated with a commercial sightseeing air tour option which exists GCNP to the east flying over the Painted Desert made necessary by limiting Zuni Point Corridor traffic to one-way. The FAA concludes that the expansion of the Desert View Flight-free Zone in and of itself will have no known cost impact on GCNP commercial air tour sightseeing operators or their tour passengers other than what has already been discussed in the context of other modifications.

(4) New Curfew (Basic Fixed Flight-free Period)

The introduction of the new curfew (basic fixed flight-free periods) for commercial air tour sightseeing operations conducted at the East-end of GCNP will result in lost revenue for those operators conducting commercial sightseeing air tours in the Zuni Point and Dragon Corridors. The reduction in time available for commercial air tour sightseeing flights in the Zuni Point and Dragon Corridors as a result of the basic fixed flight-free periods will impact just over 20.0 percent of the daily commercial sightseeing air tours offered in the summer season between May 1 and September 30, and approximately one-third of the daily commercial sightseeing air tours offered in the winter season. (The final rule defines a winter season inclusive of the month of October which, in practice, is a part of the GCNP commercial sightseeing air tour industry's summer season.)

The impact of the basic fixed flight-free periods is most likely to be realized by GCNP operators during the summer season because, as noted previously, commercial air tour sightseeing aircraft are utilized at full operational capacity during the summer season. With the introduction of a temporary freeze on the number of GCNP commercial air tour sightseeing aircraft, however, the only alternative available to GCNP commercial air tour sightseeing operators during the summer season will be to eliminate commercial sightseeing air tours which currently occur during hours included in the basic fixed flight-free period. The FAA expects that some of this loss of revenue could be recovered through ticket price increases, and some of it will be offset as a result of lower variable operating costs due to the reduced number of commercial sightseeing air tours being conducted in the summer. During the winter season, however, the FAA assumes there will be sufficient operational underutilization of aircraft such that GCNP operators will reschedule commercial sightseeing air tours currently operating during the basic fixed flight-free period into non flight-free times.

Based on 1995 estimates, the potential loss of revenue resulting from the summer curfew is nearly $1.8 million or 14.9 percent when compared with the GCNP commercial air tour sightseeing revenue of $12.3 million derived from commercial sightseeing air tours conducted on the East-end of GCNP. (When compared with the total GCNP commercial air tour sightseeing revenue of $113.1 million generated in 1995, the potential loss is 1.6 percent). The estimated amount of average annual commercial air tour sightseeing revenue for the 10-year time period 1997–2008, that could be potentially effected during the summer season, is about $2.4 million (total revenue net of variable aircraft operating cost is $1.4 million).

The FAA estimates that just under 2400 commercial sightseeing air tours will be rescheduled during the rule's basic fixed flight-free period winter season. (Comments offered by commercial sightseeing operators who addressed the curfew issue at the Scottsdale/Las Vegas public hearings, generally maintained that a curfew during the winter season would cause minimal disruption to commercial sightseeing tour schedules.) The resulting air traffic compression during non-curfew times, however, will result in some increase in aircraft activity with a corresponding increase in noise levels in GCNP during the time periods that commercial air tour sightseeing aircraft are permitted to operate.

(5) Reporting Requirements

Section 93.917 will establish operator reporting requirements. All certificate holders operating within the GCNP SFRA will incur costs due to this section during the 5-year time frame (1997 through 2001) that these reporting requirements will be in effect.

The reporting requirements for § 93.917 include:

(a) Each certificate holder will have to establish a system to codify the required information and then update this system (there are no existing reporting requirements).

(b) Three times a year, within 30 days after April 30, August 31, and December 31, each certificate holder will have to submit in writing specific information to the Las Vegas FSDO.

The FAA estimates that it will take each certificate holder one week to establish and set up the reporting system. Thereafter, each operator could use a spreadsheet program to maintain and update daily information; accordingly, a computer specialist will not be needed to set up an operator's report system. The FAA estimates that the total one-time cost in 1995 dollars for all GCNP certificated operators will be approximately $10,550 or about $340 for each operator.

After the initial set up of task 'a' above has been accomplished, updating will be required throughout the entire 5-year time frame of this recordkeeping requirement. The total amount of time needed to update this information will be a function of the number of aircraft that each operator has. The FAA assumes that it will take each operator about 10 minutes per aircraft per day to record the updated information onto a master spreadsheet. The FAA estimates the total annual cost in 1995 dollars for this task for the time period 1997–2001, will be about $70,200, or about $515 per aircraft each year.

Task 'b' above requires written information to be provided to the Las Vegas FSDO three times in each of the years 1997 through 2001. The FAA assumes this will take about one-half of an hour for each operator to compile the information, 15 minutes for each operator to fill out the generic information on the report, and an additional 5 minutes per aircraft for the specific information needed in the

report. The FAA estimates the total annual cost in 1995 dollars for this task for the time period 1997–2001, will be about $900, or about $30 per operator each year.

In addition to the above detailed operator costs, the FAA will incur costs as well. FAA costs will result from the recording and tracking of the information provided by the operators. The FAA assumes this task will be handled by a GS–13 inspector (paid at the full wage, including all fringe benefits, of $34.29/hr) located at the Las Vegas FSDO; thus, no outside contractor will be needed. This inspector will need about one hour to review each operator's report or about 93 hours total each year. The FAA estimates that the total cost to the FAA of this component of the reporting requirement will be approximately $16,000, or about $3,200 annually.

For the operators, total costs sum to approximately $366,000 while the total costs for the FAA sum to approximately $16,000. The total average annual cost of the reporting requirements for the 5-year period 1997 through 2001 is about $76,400 ($73,200 for operators, $3,200 for the FAA).

Temporary Freeze on Number of Aircraft

Assuming the temporary freeze on the number of aircraft introduced with this final rule will conclude with the publication date of the final rule on GCNP Noise Limitations, the FAA estimates the potential impact will be a loss of operator total revenue of approximately $3.9 million ($2.9 million, net of variable aircraft operating costs) owing to the cancellation of nearly 2400 commercial sightseeing air tours carrying 22,350 passengers. These estimates reflect the 3.3 percent compound annual rate of growth in GCNP commercial sightseeing activity. If certain larger, more quiet aircraft are permitted to be substituted such that the total GCNP commercial air tour sightseeing fleet remains unchanged from the level imposed by the freeze, much of this loss of revenue could be negated.

Cost Summary

The FAA estimates that the average annual costs of the six changes contained in the final rule ((1) modification of the SFRA dimensions; (2) establishment of new and modification of existing flight-free zones; (3) establishment of new and modification of existing flight corridors; (4) institution of a curfew (flight-free period) on the East end of GCNP; (5) addition of reporting requirements for commercial air tour sightseeing companies operating in the SFRA; and (6) a temporary freeze on the number of aircraft) is approximately 8.0 million in potential operator revenue losses net of variable aircraft operating costs, added consumer costs, and added federal administrative costs. The breakdown by final rulemaking change(s) is as follows: 1–3) $2.9 million loss of operator revenue net of variable aircraft operating costs with an additional cost to the consumer of $740,700 in increased ticket prices associated with the establishment and modification of flight-free zones and corridors; (4) $76,000 for new operator and FAA recordkeeping and reporting requirements; (5) $1.4 million in revenue loss net of variable aircraft operating costs for the introduction of the basic fixed flight free periods; and 6) $2.9 million in potential revenue loss net of variable aircraft operating costs resulting from the temporary freeze on the number of aircraft.

Benefits

The benefits of noise reduction attributable to this rulemaking can be broadly categorized as use and non-use benefits. Use benefits are the benefits perceived by individuals from the direct use of a resource such as hiking, rafting, or sightseeing. Non-use benefits are the benefits perceived by individuals from merely knowing that a resource is preserved in a given state. The use benefits of this rulemaking have been estimated and are presented below. The non-use benefits attributable to this rulemaking have not been estimated, but are qualitatively discussed.

Economic studies have not been conducted specifically to estimate benefits for this rulemaking. Benefits, are therefore, estimated by combining analogous situations (with value estimates) from existing economic studies with site-specific information related to GCNP and other information to estimate benefits. Certain criteria should be applied to ensure that appropriate studies are selected for purposes of benefits estimation. The criteria used in this rulemaking are listed below.

Selected economic studies must reasonably represent the resources to be valued in terms of physical characteristics, service flows, user characteristics, and available substitutes.

Selected economic studies must be scientifically sound. Studies that are either published in peer-reviewed academic journal or are conducted by a recognized university-associated researcher or established consulting firm are considered to be scientifically sound.

Selected economic studies must use appropriate valuation methodologies. The studies selected to estimate the benefits of this rulemaking conform to each of these criteria.

The site-specific information used in the benefit estimation includes visitation data for GCNP and a visitor survey conducted to document the visitor impacts of aircraft noise within GCNP. The available visitation data for GCNP permits the categorization of visitors into the following groups: back country users (115,500 visitor days), river users, and other visitors (5,801,800 visitor days).

The GCNP visitor survey indicates that these different visitor groups are variously affected by aircraft noise (HBRS, Inc. and Harris Miller Miller & Hanson, Inc. 1993). This survey asked respondents to classify the interference of aircraft noise with their appreciation of the natural quiet of GCNP as either "not at all," "slightly," "moderately," "very much," or "extremely."

The FAA used three economic studies in estimating recreational benefits in terms of consumer surplus. Consumer surplus is the difference between the maximum amount a consumer is willing to pay and what the consumer actually pays. It is a measure of the increase in well being gained by individuals through participation in recreational. The three studies valued recreation activities in or near GCNP as hiking: $43.16 per visitor day; multi-day rafting: $128.21; and other ground sightseeing: $39.71. It is assumed that these values represent the value of participating in the indicated activities at GCNP absent any impact from aircraft noise.

These data and assumptions imply the following total lost values from all aircraft noise in 1995. The total lost value of $29.7 million was calculated as the product of the number of visitor-days, the proportion of visitors affected by aircraft noise, the visitor-day value, and the assumed proportional reduction in the visitor-day value. (See Regulatory Evaluation for details).

The benefit of this rulemaking is that portion of the total lost value that is associated with the resulting noise reduction. The indicated percent reduction in aircraft noise for each year was applied to the total lost value from all aircraft noise to yield the current use benefit for that year. Linear interpolation was used to estimate benefits between the years 1997 to 2000, and 2001 to 2008. A 3 percent discount rate was then applied to calculate the present value of use benefits over the 12 year regulatory evaluation period. Using

a 7 percent discount rate, the present value of the benefits is $136.2 million.

The FAA and the NPS believes that the true representation of benefits from the rule are reflected by the 3 percent discount rate with a resulting value of $172,416,000. Economics literature supports a 3 percent discount rate for natural resource valuation (e.g., Freeman 1993), and recent Federal rulemaking also support a 3 percent discount rate for natural resource valuation (61 FR 453; 61 FR 20584).

Summarizing the above results, the FAA estimates the discounted use benefits of this final rulemaking during the 12-year period 1997–2008 to be $172 million discounted at three percent. In addition to these use benefits, this rulemaking would likely generate non-use benefits. The FAA does not have adequate data to estimate non-use benefits of aircraft noise reduction at the Grand Canyon. However, there are other studies that do suggest the possible existence of significant non-use benefits that can be attributed to this rulemaking.

Benefit/Cost Comparison

The total present value cost (operator revenue loss net of variable aircraft operating costs, ticket price increases, and recording costs) of the final rule will be $42.1 million. The total present value of benefits are $172.0 million. Since the total costs are less than the total benefits, the FAA contends that the final rule will be cost beneficial.

Final Regulatory Flexibility Analysis

By both law and executive order, Federal regulatory agencies are required to consider the impact of final regulations on small entities. Executive Order 12866 "Regulatory Planning and Review", dated September 30, 1993, states that:

Each agency shall tailor its regulations to impose the least burden on society, including individuals, businesses of different sizes, and other entities (including small communities and governmental entities), consistent with obtaining the regulatory objectives, taking into account, among other things, and to the extent practicable, the costs of cumulative regulations.

The 1980 "Regulatory Flexibility Act" (RFA), as amended, requires Federal agencies to prepare a final regulatory flexibility analysis of each final rule that will have a significant economic impact on a substantial number of small entities. The definition of small entities and guidance material for making determinations required by the RFA are contained in the **Federal Register** [47 FR 32825, July 29, 1982].

With respect to this final rule, a "small entity" essentially is a commercial sightseeing air tour operator owns or operates nine or fewer aircraft. A significant economic impact on a small entity is defined as an annualized net compliance cost to such a small commercial air tour sightseeing operator. In the case of scheduled operators of aircraft for hire having fewer than 60 passenger seats, a "significant economic impact" or cost threshold, is defined as an annualized net compliance cost level that exceeds $69,800; for unscheduled operators the threshold is $4,900. A substantial number of small entities is defined as a number that is more than one-third of the small commercial sightseeing operators (but not less than eleven operators) subject to the final rule.

The Federal Aviation Administration has determined that this final rule and the NPRM that is being published simultaneously, will have a significant economic impact on all commercial sightseeing operators conducting flights within Grand Canyon National Park, and, therefore, has prepared this final regulatory flexibility analysis of the final rule. A separate regulatory flexibility analysis of the NPRM is contained in that document. The analysis, structured in accordance with section 604 of the RFA as amended requires the following:

1. A succinct statement of the need for and objectives of the final rule;

2. A summary of the significant issues raised by public comments in response to the initial regulatory flexibility analysis, a summary of the assessment of the agency of such issues, and a statement of any changes made in the proposed rule as a result of such comments;

3. A description of and an estimate of the number of small entities in which the rule will apply or an explanation of why no such estimate is available;

4. A description of the projected reporting, recordkeeping and other compliance requirements of the rule, including an estimate of the classes of small entities which will be subject to the requirement and the type of professional skills necessary for the report or record; and

5. A description of the steps the agency has taken to minimize the significant economic impact on small entities consistent with the stated objectives of applicable statutes, including a statement of the factual, policy, and legal reasons for selecting the alternative adopted in the final rule and why each of the other significant alternatives to the rule considered by the agency which affect the impact on small entities was rejected.

Why FAA Action is Being Considered: The final rule to establish noise limitations for certain aircraft operations in the vicinity of the Grand Canyon National Park stems from the need to further reduce the impact of aircraft noise on the park environment and to assist the National Park Service in achieving its statutory mandate imposed by Public Law 100–91 to provide for the substantial restoration of natural quiet and experience in the Grand Canyon National Park.

Significant Issues Raised by Public Comments: Only one commenter specifically addressed the impact on small businesses. The Small Business Administration (SBA) questioned the findings of the regulatory flexibility analysis contained in the NPRM with respect to the impact on small tour operators because revenue losses were assessed at the aggregate level. The SBA also suggested that a different compliance and reporting requirement or different timetables for small entities should be explored, that the FAA propose performance rather than design standards, and that small entities be considered for exemption from all or part of the rule requirements. The FAA has reviewed the SBA's comment and, they are discussed in the alternatives section of this analysis.

The SBA also suggested that it would be appropriate to use elasticity of demand information to calculate the extent to which small businesses will recoup costs by increasing fares. The data for this segment of the population, however, are not available, but this issue is discussed in the full regulatory analysis of the final rule. The SBA also had suggested that the FAA evaluate data on profits which "may be available from Dun and Bradstreet." However, data on actual profits from very small entities that would be affected by this proposal are not publicly available from the recommended source or within the public docket. In addition, the SBA believes that the FAA has not fully considered other significant options. Given both the qualitative and quantitative costs and benefits, the FAA believes that the best option that minimizes costs and maximizes benefits was chosen. With regard to other concerns made by the SBA, the FAA has taken these comments into consideration in producing the final RFA and in estimating costs associated with this rulemaking.

Description and Estimated Number of Small Entities Effected: The rulemaking will affect commercial air tour sightseeing operators conducting flights

over the Grand Canyon National Park under 14 CFR part 135. FAA data shows that in 1995, there were 26 potentially affected small commercial sightseeing operators, each owning, but not necessarily operating 9 or fewer aircraft. These operators owned a total of 70 aircraft and the average fleet consisted of about 3 airplanes. The FAA estimates that these 26 operators, will be impacted by the final rule.

Cost of Compliance to Small Entities

Projected Reporting, Recordkeeping, and Other Compliance Requirements of the Proposed Rule

Section 93.917 will establish operator reporting requirements. All certificate holders operating within the GCNP SFRA will incur costs due to this section during the five-year time frame (1997 through 2001) that these reporting requirements will be in effect.

The reporting requirements for section 93.917 include:

(a) Each certificate holder will have to establish a system to codify the required information and then update this system.

(b) Three times a year, within 30 days after April 30, August 31, and December 31, each certificate holder will have to submit in writing specific information to the Las Vegas FSDO.

In developing these costs, the FAA assumes that each operator maintains an existing list of what each one of his/her aircraft is doing each day. The operators require this information for maintenance planning purposes, and such a list will include how many hours are left before the next scheduled inspection and how many flights can be flown before it is due. Since the operators already have this information, the FAA assumes that it could be loaded into a spreadsheet program. The FAA also assumes that the total amount of time needed to process and compile the information is a function of the number of airplanes that the operator has. This work could most likely be performed by a flight dispatcher.

The FAA estimates that it will take each certificate holder one week to establish and set up the reporting system. Thereafter, each operator could use a spreadsheet program to maintain and update daily information; accordingly, a computer specialist will not be needed to set up an operator's reporting system.

The recordkeeping requirement described above will have to be updated throughout the entire five-year time frame. The total amount of time needed to update this information will be a function of the number of aircraft that each operator has. The FAA assumes that it will take each operator about 10 minutes per day to record the updated information onto a master spreadsheet.

In addition, the required information is to be provided to the Las Vegas FSDO three times in each of the years 1997 through 2001. The FAA assumes that this will take about one-half of an hour for each operator to compile the information, 15 minutes for each operator to fill out the generic information on the report and an additional 5 minutes per aircraft for the specific information needed in the report.

The FAA estimates that compliance with the final rule's recordkeeping requirements will impose an additional 61 hours of labor per aircraft each year once the initial set-up of a reporting system had been accomplished. The average annual cost per aircraft will be about $515, but the average annual cost per affected operator will depend on an operator's fleet size. The one-time initial set-up cost for each operator regardless of fleet size will be about $340.

All commercial air tour sightseeing operators will be subject to the recordkeeping requirement costs. The FAA estimates that the maximum annual cost of this requirement will be about $540 per aircraft. If an operator has nine aircraft (the maximum allowable number of aircraft owned to be considered a "small entity"), that operator's annual cost will be about $4,860, which is about $40 below the thresholds for significant cost for scheduled and unscheduled operators.

Zuni Point Corridor

Of the final rule changes, one of the most costly—in terms of increased tour lengths, increased consumer prices, and increased traffic in the Dragon Corridor—will be the restriction of one-way traffic in the Zuni Point Corridor. This change, however, will only impact at most five operators currently offering a two-way tour of the Zuni Point Corridor. The number of operators affected by this requirement is less than one-third of all GCNP commercial air tour sightseeing operators. Thus, a substantial number of small operators will not be significantly impacted.

Basic Fixed Flight-Free Periods

Only the commercial air tour sightseeing operators based in Tusayan or those who have flights entering the GCNP SFRA from the east end of the Grand Canyon will be subject to the basic fixed flight-free periods. The FAA estimates that the average annual cost of this requirement to these operators will be about $30,500 in net operating revenue loss per aircraft on average. Any operator with 9 or fewer aircraft will incur costs that exceed the threshold for significant costs for unscheduled ($4,900) operators, and any operator with from 4 to 9 aircraft will exceed the threshold for significant costs for scheduled ($69,800) operators. Five of the 31 operators conducting commercial sightseeing air tours of GCNP own more than 9 aircraft and will not be considered a "small entity". Six operators own between four and nine aircraft. Thus, this final requirement will not have a significant economic impact on a substantial number of small entities, because only a maximum of six operators out of 31 will be significantly impacted.

The final rule will affect certain operators who conduct air tours between Las Vegas and Tusayan. Currently, these operators follow the Colorado River inside the GCNP during part of that flight. All these operators will no longer be allowed to conduct this flight along the Colorado River, as a result of this final rule. This rule changes these 12 operators from airtour operators to commuter operators.

The FAA estimates that using 1995 as a baseline, the above 12 operators with 82 aircraft will incur average annual revenue losses, net of variable operating costs, of $2,397,900. Therefore, the net impact per aircraft will be about $29,200 ($18,900 discounted). Assuming as a worse case, that all of these operators are unscheduled (which they are not), then the threshold for significant costs would be $4,900. Therefore, all of the operators would suffer a significant economic impact. However, there are only nine small operators (29 percent) that will be adversely affected. The FAA concludes that a substantial number of small entities will not be significantly impacted.

Description of Alternative Actions

This rule is somewhat unique in that most of the economic impact of the rule falls upon small businesses. Consequently, all alternatives considered during formulation of this final rule are actually alternatives related to small entities. Numerous alternatives have been suggested and considered by the many forums that have studied the issue since 1986 when the FAA issued SFAR No. 50 that established flight regulations in the vicinity of the Grand Canyon. In 1994, the DOI submitted a report to Congress containing recommendations for restoring natural quiet in the park. Alternatives that were recommended to be considered, separately or in concert, included simplification of the

commercial air tour sightseeing route structure, expansion of the flight free zones, phased-in use of quieter aircraft, technology, separation of park ground visitors and air tour overflights, exploiting natural attenuation, reducing duration of noise intrusions, and encouraging use of greater payload aircraft. Many combinations of all of these alternatives or recommendations were considered in developing this rule. The NPRM, inviting public comment was published July 31, 1996. The following month, on August 21, the NPRM Draft Environmental Assessment was published in the **Federal Register** inviting further public comment. Public hearings were held September 16–20 in Scottsdale, Arizona and Las Vegas, Nevada to obtain additional public comment on the NPRM and the draft environmental assessment. Finally, Congressional hearings were held on the issue October 10–11, 1996.

To recount all the alternatives and combination of alternatives that were considered as a result of these actions is beyond the scope of this analysis. Clearly, however, the two primary goals of this rule are to (1) restore natural quiet, and (2) preserve the opportunity for the public to enjoy air tours at GCNP. Integrally connected with the second goal is preservation of the air tour industry serving the park, which is primarily composed of small entities.

Probably the only alternative not considered was to extend the compliance period beyond the year 2008. This alternative was rejected because the President's Memorandum dated April 22, 1996 directed that restoration of the natural quiet be accomplished by 2008. The FAA believes that the least burdensome way for small entities to accomplish restoration of natural quiet by 2008 is through the requirements of this final rule and the NPRM being published at the same time. A brief discussion of specific alternatives to reduce the impact on small entities suggested by the SBA in that agency's comments on the NPRM is as follows:

Lessen Projected Reporting and Recordkeeping Requirements

The FAA considered several ways to lessen the impact of these requirements on small entities. The first way was to not require any reporting by small entities. Another was to require the identical reporting requirements on each firm, regardless of the size of that firm. The third was to tailor the reporting to the size of the firm.

The FAA rejected the first alternative because the vast majority of the firms are small entities. Collecting the information from only large entities would not be useful to establish accurate information on GCNP overflights for noise and safety management purposes. In addition, the FAA would not be able to validate FAA and NPS noise models for use in noise mitigation studies or determine with precision when and where noise mitigation is required. Finally, the FAA would have no basis for creating a more flexible and adaptable noise management system.

The second alternative was to require identical reporting requirements regardless of firm size. This alternative was also rejected because larger firms with more aircraft are likely to create more noise than smaller firms with fewer aircraft. The FAA does not believe that it is reasonable to burden all firms with the identical requirements. The FAA also believes that some information would be lost (if the reporting requirements were made too lenient) or too much unnecessary information would be obtained if all operators had the identical requirements.

The third (chosen) alternative tailored the recordkeeping requirements to the size of the firm. As documented in the regulatory evaluation, much of the information that is being requested is based on the number of aircraft an operator owns or operates. That is, a smaller firm with fewer aircraft would be burdened less than a larger firm with more aircraft.

Propose Performance Based Standards

The SBA suggested that the FAA consider the use of performance rather than design standards as applied to small entities. The FAA is interested in taking advantage of the benefits of performance standards. The agency completed a major study in April, 1996 called "Challenge 2000" to serve as a guide for a comprehensive change program for the FAA to provide essential regulation and enforcement services. These services would be provided with expected levels of resources into the next century. One recommendation of that study was for the agency to evolve performance based regulations. Although the FAA did not identify an opportunity to implement any performance regulations in the final rule, some evolution in that direction is contained in the NPRM being issued simultaneously with this final rule. In the NPRM, aircraft are categorized in accordance with their noise performance, and the noisier performers are proposed to be phased out of air tour service in the vicinity of GCNP.

Exempt Small Entities From Some Provisions of the Rule

The SBA commented that the FAA should explore a much more aggressive approach in considering this alternative. The FAA has attempted to minimize the economic impact of restoring quiet to the park on air tour operators, most of which are the small entities impacted by this rule. But if small entities, which comprise 26 of the 31 operations impacted were exempted from any operational provisions of the rule, the goal of restoring natural quiet to the Grand Canyon would not be achieved. Based on the above discussion, the FAA sees no practical way to exempt small entities from any of the provisions of the final rule.

Statement of Legal and Policy Reasons for Adopting the Rule

The FAA is directed to promote the safe flight of civil aircraft in air commerce by Subtitle VII Part A of Title 49, United States Code. As such, it is the only agency empowered to control aircraft flight in U.S. airspace. Further, Section 3 of Public Law 100–91, commonly known as the National Park Overflight Act, mandated substantial restoration of the natural quiet and experience of the park and protection of public health and safety from adverse effects associated with aircraft overflight.

The primary policy reason for adopting this rule, is that it is the best compromise the FAA has been able to formulate to achieve the mandate of Public Law 100–91 and maintain a viable air tour industry serving GCNP. Further, the President published a memorandum in the **Federal Register** on April 22, 1996 requiring that the goal of restoration of natural quiet as defined by the Secretary of the Interior in accordance with the Overflights Act be completed in the park no later than April 22, 2008.

International Trade Impact Assessment

The FAA has determined that the rulemaking will not affect non-U.S. operators of foreign aircraft operating outside the United States or U.S. trade. It could however, have an impact on commercial air tour sightseeing at GCNP, much of which is foreign.

These changes will effectively reconfigure GCNP flight-free zones and flight corridors, reduce the time available for commercial sightseeing air tours to be conducted and in some cases, prolong the time a commercial air tour sightseeing passenger spends in an airplane not necessarily sightseeing. To the extent a commercial sightseeing air

tour of GCNP is perceived to be a devaluation in the current service offered, commercial air tour sightseeing could be impacted concomitant with a potential loss of revenue.

The United States Air Tour Association estimates that 60 percent of all commercial sightseeing air tourists in the United States are foreign. The Las Vegas FSDO, however, believes this estimate to be considerably higher at GCNP, perhaps as high as 90 percent. The FAA cannot put a dollar value on the portion of the potential loss in commercial air tour sightseeing revenue associated with the loss of foreign tour dollars.

Federalism Implications

The regulations herein would not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government. Therefore, in accordance with Executive Order 12866, it is determined that this rule does not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

Paperwork Reduction Act

Section 93.317 contains information collection requirements. As required by the Paperwork Reduction Act of 1995 (44 U.S.C. 3507(d)), the FAA submitted a copy of this section to the Office of Management and Budget (OMB) for its review, and has received a 1-year clearance to obtain this information (OMB Control No. is 2121–0602).

Conclusion

This rule will reduce the impact of aircraft noise on the park environment in the Grand Canyon. The combination of expanded flight-free zones and closure of the Fossil Corridor will make significant progress toward achieving the NPS's goal of substantial restoration of natural quiet. The NPRM being published today would further assist in accomplishing this goal by a combination of requirements that would limit future use of noisier aircraft and that would provide incentives for the use of quieter aircraft. The initial aircraft phaseout proposed in the accompanying notice, in conjunction with this rule, would provide a significant reduction in noise and make a major contribution toward achieving the Congressional mandate of substantial restoration of natural quiet by the year 2000. Modeling shows that, if the phaseout is adopted as proposed, the substantial restoration objective would be exceeded by 2008. The phase out of noisier aircraft would ensure substantial restoration of natural quiet under conditions where additional noise efficient aircraft are added to the commercial sightseeing fleet as predicted in forecasting models.

For the reasons discussed in the preamble, and based on the findings in the Regulatory Flexibility Determination and the International Trade Impact Analysis, the FAA has determined that this final rule is a significant regulatory action under Executive Order 12866. In addition, the FAA certifies that this final rule will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act. This final rule is considered significant under DOT Regulatory Policies and Procedures.

Other Actions

Comprehensive Noise Management Plan

The rule reflects the understanding of the FAA and NPS that the conversion of the commercial sightseeing aircraft fleet operating in the SFRA to a more noise efficient fleet is the most promising approach to providing for the substantial restoration of natural quiet mandated by Public Law 100–91 and allowing for some measure of growth in the commercial sightseeing industry. To ensure that the rule provides the fairest solution for all parties involved, the FAA and NPS are committed to the joint development of a noise management plan no later than five years after May 1, 1997, the effective date of this rule. It will provide for a more adaptive management system, full resolution of all monitoring and modeling issues, additional public input, and the provision of improved incentives to invest in noise efficient aircraft. The purpose is to further refine the proposal (proposed § 93.319) in the NPRM regarding Noise Limitations for Aircraft Operations in the Vicinity of Grand Canyon National Park, published concurrently with this final rule, with the intent of providing for substantial restoration of natural quiet mandated by Public Law 100–91. To ensure development of a flexible and adaptive approach to noise mitigation and management, this plan will, at a minimum, (1) address development of a reliable aircraft operations and noise database, (2) validate and document the most effective uses for FAA and NPS noise models in GCNP, (3) explore how the conversion to a noise efficient fleet can most effectively contribute to the substantial restoration of natural quiet while allowing for growth in the industry, and how, in this context, incentives can best be provided to promote this conversion. The FAA and NPS are committed to an open process that will provide for full public involvement and consultation with Native American tribes.

Park Air Operations

GCNP has one of the most strictly regulated aviation programs within the NPS and the DOI. The park limits use of its contracted aircraft to activities involving life or health-threatening emergencies, administration and/or protection of resources, and for individually approved special purpose missions. Each flight request is reviewed to ensure that it is the most efficient, economical, and effective method of performing the required task consistent with NPS and GCNP goals. These goals include the protection of natural quiet and experience, as reinforced by the park's recently approved General Management Plan. At the earliest possible date, consistent with contracting requirements and budgetary constraints, GCNP will convert to the quietest aircraft available that would also meet mission requirements.

Route Design and Modification

Recognizing that the design/location of tour routes within the SFRA is another critical component in achieving the substantial restoration of natural quiet in GCNP, the FAA, after consultation with the NPS, has proposed air tour routes in a separate notice issued concurrently with this final rule. These routes were designed in light of safety, noise mitigation, and economic considerations. The FAA welcomes and will consider any and all comments regarding these proposed routes, including those received through government-to-government consultation with Native American tribes. Any subsequent modifications to these routes would entail a similar process utilizing the same considerations.

List of Subjects

14 CFR Part 91

Aircraft, Airmen, Air traffic control, Aviation safety, Noise control, Reporting and recordkeeping requirements.

14 CFR Part 93

Air traffic control, Airports, Navigation (Air), Reporting and recordkeeping requirements.

14 CFR Part 121

Aircraft, Airmen, Aviation safety, Charter flights, Safety, Transportation.

14 CFR Part 135

Air taxis, Aircraft, Airmen, Aviation safety.

Adoption of Amendments

Accordingly, the Federal Aviation Administration (FAA) amends 14 CFR parts 91, 93, 121, and 135 as follows:

PART 91—GENERAL OPERATING AND FLIGHT RULES

1. The authority citation for part 91 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40103, 40113, 40120, 44101, 44111, 44701, 44709, 44711, 44712, 44715, 44716, 44717, 44722, 46306, 46315, 46316, 46502, 46504, 46506–46507, 47122, 47508, 47528–47531.

PART 121—[AMENDED]

2. The authority citation for part 121 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 40119, 44101, 44701–44702, 44705, 44709–44711, 44713, 44716–44717, 44722, 44901, 44903–44904, 44912, 46105.

PART 135—[AMENDED]

3. The authority citation for part 135 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701–44702, 44705, 44709, 44711–44713, 44715–44717, 44722.

SFAR No. 50–2 [Removed]

4. In parts 91, 121, and 135, Special Federal Aviation Regulation No. 50–2, the text of which appears at the beginning of part 91, is removed.

PART 93—SPECIAL AIR TRAFFIC RULES AND AIRPORT TRAFFIC PATTERNS

5. The authority citation for part 93 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40103, 40106, 40109, 40113, 44502, 44514, 44701, 44719, 46301.

6. In part 93, subpart U is added to read as follows:

Subpart U—Special Flight Rules in the Vicinity of Grand Canyon National Park, AZ

Sec.

93.301 Applicability.
93.303 Definitions.
93.305 Flight-free zones and flight corridors.
93.307 Minimum flight altitudes.
93.309 General operating procedures.
93.311 Minimum terrain clearance.
93.313 Communications.
93.315 Commercial sightseeing flight operations.
93.316 Commercial sightseeing limitations.
93.317 Commercial sightseeing flight reporting requirements.
Appendix to Subpart U—Special Flight Rules in the Vicinity of the Grant Canyon National Park, AZ

Subpart U—Special Flight Rules in the Vicinity of Grand Canyon National Park, AZ

§ 93.301 Applicability.

This subpart prescribes special operating rules for all persons operating aircraft in the following airspace, designated as the Grand Canyon National Park Special Flight Rules Area: That airspace extending from the surface up to but not including 18,000 feet MSL within an area bounded by a line beginning at Lat. 35°55'12" N., Long. 112°04'05" W.; east to Lat. 35°55'38" N., Long. 111°42'12" W.; north to Lat. 36°16'47" N., Long. 111°42'17" W.; to Lat. 36°24'49" N., Long. 111°47'45" W.; to Lat. 36°52'23" N., Long. 111°33'10" W.; west-northwest to Lat. 36°53'37" N., Long. 111°38'29" W.; southwest to Lat. 36°35'02" N., Long. 111°53'28" W.; to Lat. 36°21'30" N., Long. 112°00'03" W.; west-northwest to Lat. 36°30'30" N., Long. 112°35'59" W.; southwest to Lat. 36°24'46" N., Long. 112°51'10" W.; thence west along the boundary of Grand Canyon National Park (GCNP) to Lat. 36°14'08" N., Long. 113°10'07" W.; west-southwest to Lat. 36°09'50" N., Long. 114°01'53" W.; southeast to Lat. 36°06'24" N., Long. 113°58'46" W.; thence south along the boundary of GCNP to Lat. 36°00'23" N., Long. 113°54'11" W.; northeast to Lat. 36°02'14" N., Long. 113°50'16" W.; to Lat. 36°02'16" N., Long. 113°48'08" W.; thence southeast along the boundary of GCNP to Lat. 35°58'09" N., Long. 113°45'04" W.; southwest to Lat. 35°54'48" N., Long. 113°50'24" W.; southeast to Lat. 35°41'01" N., Long. 113°35'27" W.; thence clockwise via the 4.2-nautical mile radius of the Peach Springs VORTAC to Lat. 35°28'53" N., Long. 113°27'49" W.; northeast to Lat. 35°42'58" N., Long. 113°10'57" W.; north to Lat. 35°5751 N., Long. 113°1106 W.; east to Lat. 35°57'44" N., Long. 112°14'04" W.; thence clockwise via the 4.3-nautical mile radius of the Grand Canyon National Park Airport reference point (Lat. 35°57'08" N., Long. 112°08'49" W.) to the point of origin.

§ 93.303 Definitions.

For the purposes of this subpart:

(a) *Flight Standards District Office* means the FAA Flight Standards District Office with jurisdiction for the geographical area containing the Grand Canyon.

(b) *Park* means Grand Canyon National Park.

(c) *Special Flight Rules Area* means the Grand Canyon National Park Special Flight Rules Area.

§ 93.305 Flight-free zones and flight corridors.

Except in an emergency or if otherwise necessary for safety of flight, or unless otherwise authorized by the Flight Standards District Office for a purpose listed in 93.309, no person may operate an aircraft in the Special Flight Rules Area within the following flight-free zones:

(a) *Desert View Flight-free Zone.* That airspace extending from the surface up to but not including 14,500 feet MSL within an area bounded by a line beginning at Lat. 35°59'58" N., Long. 111°52'47" W.; thence east and north along the GCNP boundary to Lat. 36°14'05" N., Long. 111°48'34" W.; southwest to Lat. 36°12'06" N., Long. 111°51'14" W.; to the point of origin; but not including the airspace at and above 10,500 feet MSL within 1 nautical mile of the western boundary of the zone. The corridor to the west, between the Desert View and Bright Angel Flight-free Zones, is designated the "Zuni Point Corridor." This corridor is 2 nautical miles wide for commercial sightseeing flights and 4 nautical miles wide for transient and general aviation operations.

(b) *Bright Angel Flight-free Zone.* That airspace extending from the surface up to but not including 14,500 feet MSL within an area bounded by a line beginning at Lat. 35°58'39" N., Long. 111°55'43" W.; north to Lat. 36°12'41" N., Long. 111°53'54" W.; northwest to Lat. 36°18'18" N., Long. 111°58'15" W.; thence west along the GCNP boundary to Lat. 36°20'11" N., Long. 112°06'25" W.; south-southwest to Lat. 36°09'31" N., Long. 112°11'15" W.; to Lat. 36°04'16" N., Long. 112°17'20" W.; thence southeast along the GCNP boundary to Lat. 36°01'54" N., Long. 112°11'24" W.; thence clockwise via the 4.3-nautical mile radius of the Grand Canyon National Park Airport reference point (Lat. 35°57'08" N., Long. 112°08'49" W.) to Lat. 35°59'37" N., Long. 112°04'29" W.; thence east along the GCNP boundary to the point of origin; but not including the airspace at and above 10,500 feet MSL within 1 nautical mile of the eastern boundary or the airspace at and above 10,500 feet MSL within 2 nautical miles of the northwestern boundary. The corridor to the east, between this flight-free zone and the Desert View Flight-free Zone, is designated the "Zuni Point Corridor." The corridor to the west, between the Bright Angel and Toroweap/Shinumo Flight-free Zones, is designated the

"Dragon Corridor." This corridor is 2 nautical miles wide for commercial sightseeing flights and 4 nautical miles wide for transient and general aviation operations.

(c) *Toroweap/Shinumo Flight-free Zone.* That airspace extending from the surface up to but not including 14,500 feet MSL within an area bounded by a line beginning at Lat. 36°05'44" N., Long. 112°19'27" W.; north-northeast to Lat. 36°10'49" N., Long. 112°13'19" W.; to Lat. 36°21'02" N., Long. 112°08'47" W.; thence west and south along the GCNP boundary to Lat. 36°10'58" N., Long. 113°08'35" W.; south to Lat. 36°10'12" N., Long. 113°08'34" W.; thence northeast along the park boundary to Lat. 36°11'51" N., Long. 113°04'44" W.; thence counter-clockwise via the 1.5-nautical mile radius of the Toroweap Overlook (Lat. 36°12'55" N., Long. 113°03'25" W.) to Lat. 36°13'46" N., Long. 113°01'54" W.; thence in an easterly direction along the park boundary to the point of origin; but not including the following airspace designated as the "Tuckup Corridor": at or above 10,500 feet MSL within 2 nautical miles either side of a line extending between Lat. 36°24'42" N., Long. 112°48'47" W. and Lat. 36°14'17" N., Long. 112°48'31" W.

(d) *Sanup Flight-free Zone.* That airspace extending from the surface up to but not including 8,000 feet MSL within an area bounded by a line beginning at Lat. 36°02'38" N., Long. 113°21'11" W.; west to Lat. 36°06'20" N., Long. 113°51'40" W.; southeast to Lat. 36°00'07" N., Long. 113°42'58" W.; southeast to Lat. 35°59'37" N., Long. 113°42'47" W.; to Lat. 35°59'20" N., Long. 113°43'00" W.; to Lat. 35°58'40" N., Long. 113°43'58" W.; southeast to Lat. 35°50'16" N., Long. 113°37'13" W.; thence along the park boundary to the point of origin.

§ 93.307 Minimum flight altitudes.

Except in an emergency, or if otherwise necessary for safety of flight, or unless otherwise authorized by the Flight Standards District Office for a purpose listed in 93.309, no person may operate an aircraft in the Special Flight Rules Area at an altitude lower than the following:

(a) *Minimum sector altitudes.* (1) *Commercial sightseeing flights.* (i) Marble Canyon Sector. Lees Ferry to Boundary Ridge: 6,000 feet MSL.

(ii) *Supai Sector.* Boundary Ridge to Supai Point: 7,500 feet MSL.

(iii) *Diamond Creek Sector.* Supai Point to Diamond Creek: 6,500 feet MSL.

(iv) *Pearce Ferry Sector.* Diamond Creek to the Grand Wash Cliffs: 5,000 feet MSL.

(2) *Transient and general aviation operations.* (i) *Marble Canyon Sector.* Lees Ferry to Boundary Ridge: 8,000 feet MSL.

(ii) *Supai Sector.* Boundary Ridge to Supai Point: 10,000 feet MSL.

(iii) *Diamond Creek Sector.* Supai Point to Diamond Creek: 9,000 feet MSL.

(iv) *Pearce Ferry Sector.* Diamond Creek to the Grand Wash Cliffs: 8,000 feet MSL.

(b) *Minimum corridor altitudes.*

(1) *Commercial sightseeing flights.* (i) *Zuni Point Corridors,* 7,500 feet MSL.

(ii) *Dragon Corridor.* 7,500 feet MSL.

(2) *Transient and general aviation operations.* (i) *Zuni Point Corridor.* 10,500 feet MSL.

(ii) *Dragon Corridor.* 10,500 feet MSL.

(iii) *Tuckup Corridor.* 10,500 feet MSL.

§ 93.309 General operating procedures.

Except in an emergency, no person may operate an aircraft in the Special Flight Rules Area unless the operation is conducted in accordance with the following procedures. (Note: The following procedures do not relieve the pilot from see-and-avoid responsibility or compliance with the minimum safe altitude requirements specified in § 91.119 of this chapter.):

(a) Unless necessary to maintain a safe distance from other aircraft or terrain remain clear of the flight-free zones described in § 93.305;

(b) Unless necessary to maintain a safe distance from other aircraft or terrain, proceed through the Zuni Point, Dragon, and Tuckup Flight Corridors described in § 93.305 at the following altitudes unless otherwise authorized in writing by the Flight Standards District Office:

(1) *Northbound.* 11,500 or 13,500 feet MSL.

(2) *Southbound.* 10,500 or 12,500 feet MSL.

(c) For operation in the flight-free zones described in § 93.305, or flight below the altitudes listed in § 93.307, is authorized in writing by the Flight Standards District Office and is conducted in compliance with the conditions contained in that authorization. Normally authorization will be granted for operation in the areas described in § 93.305 or below the altitudes listed in § 93.307 only for operations of aircraft necessary for law enforcement, firefighting, emergency medical treatment/evacuation of persons in the vicinity of the Park; for support of Park maintenance or activities; or for aerial access to and maintenance of other property located within the Special Flight Rules Area. Authorization may be issued on a continuing basis;

(d) Is conducted in accordance with a specific authorization to operate in that airspace incorporated in the operator's operations specifications and approved by the Flight Standards District Office in accordance with the provisions of this subpart;

(e) Is a search and rescue mission directed by the U.S. Air Force Rescue Coordination Center;

(f) Is conducted within 3 nautical miles of Grand Canyon Bar Ten Airstrip, Pearce Ferry Airstrip, Cliff Dwellers Airstrip, or Marble Canyon Airstrip at an altitude less than 3,000 feet above airport elevation, for the purpose of landing at or taking off from that facility; or

(g) Is conducted under an instrument flight rules (IFR) clearance and the pilot is acting in accordance with ATC instructions. An IFR flight plan may not be filed on a route or at an altitude that would require operation in an area described in § 93.305.

§ 93.311 Minimum terrain clearance.

Except in an emergency, when necessary for takeoff or landing, or unless otherwise authorized by the Flight Standards District Office for a purpose listed in § 93.309(c), no person may operate an aircraft within 500 feet of any terrain or structure located between the north and south rims of the Grand Canyon.

§ 93.313 Communications.

Except when in contact with the Grand Canyon National Park Airport Traffic Control Tower during arrival or departure or on a search and rescue mission directed by the U.S. Air Force Rescue Coordination Center, no person may operate an aircraft in the Special Flight Rules Area unless he monitors the appropriate frequency continuously while in that airspace.

§ 93.315 Commercial sightseeing flight operations.

(a) Non-stop sightseeing flights that begin and end at the same airport, are conducted within a 25-statute-mile radius of that airport, and operate in or through the Special Flight Rules Area during any portion of the flight are governed by the provisions of part 119, SFAR 38–2 of parts 121 and 135 of this chapter, part 121, and part 135 of this chapter, as applicable.

(b) No person holding or required to hold an air carrier certificate or an

operating certificate under SFAR No. 38–2 or part 119 of this chapter may operate an aircraft having a passenger-seat configuration of 30 or fewer seats, excluding each crewmember seat, and a payload capacity of 7,500 or less pounds, in the Special Flight Rules Area except as authorized by the applicable operations specifications.

§ 93.316 Commercial sightseeing limitations.

(a) Unless otherwise authorized by the Flight Standards District Office, no person shall conduct commercial sightseeing operations in the Dragon and Zuni Corridors during the following fixed flight-free periods:

(1) Summer season (May 1–September 30)—6 p.m. to 8 a.m. daily; and

(2) Winter season (October 1–April 30)—5 p.m. to 9 a.m. daily.

(b) No person may operate more commercial sightseeing aircraft in the Special Flight Rules Area than the highest number of aircraft that appeared on the certificate holder's operations specifications, and that were used for commercial sightseeing operations in the Grand Canyon Special Flight Rules Area, between July 31, 1996 and December 31, 1996.

§ 93.317 Commercial sightseeing flight reporting requirements.

Each certificate holder conducting commercial sightseeing flights within the Special Flight Rules Area shall submit in writing, within 30 days after April 30, August 31, and December 31, of each year, to the Flight Standards District Office the following information for each operation within the Special Flight Rules Area for the prior 4-month period:

(a) Identification number (registration number) of each aircraft;

(b) Departure airport;

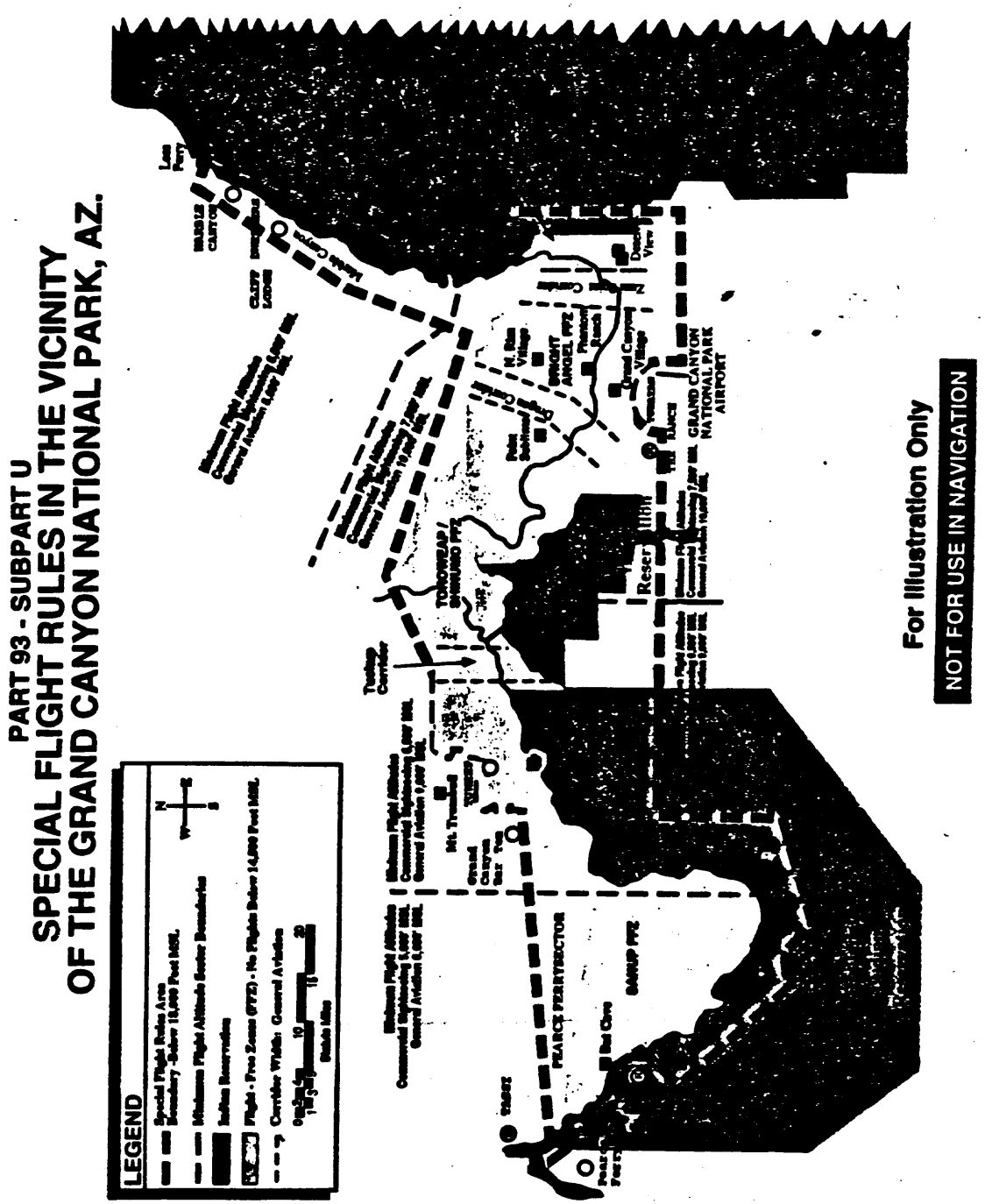
(c) Departure date and time; and

(d) Route(s) flown.

These reporting requirements continue through May 31, 2002.

BILLING CODE 4910-13-P

Appendix to Subpart U—Special Flight Rules in the Vicinity of the Grand Canyon National Park, AZ



Issued in Washington, DC, on December 24, 1996.

Linda Hall Daschle,

Acting Administrator.

[FR Doc. 96–33146 Filed 12–30–96; 8:45 am]

BILLING CODE 4910–13–C

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 93

[Docket No. 28770; Notice No. 96-15]

RIN 2120-AG34

Noise Limitations for Aircraft Operations in the Vicinity of Grand Canyon National Park

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: This notice of proposed rulemaking proposes to establish noise limitations for certain aircraft operated in the vicinity of Grand Canyon National Park. This notice is one part of an overall strategy to reduce further the impact of aircraft noise on the park environment and to assist the National Park Service in achieving its statutory mandate imposed by Public Law 100-91 to provide for the substantial restoration of natural quiet and experience in Grand Canyon National Park. To this end, this proposed rule is issued concurrently with a final rule affecting the Special Flight Rules in the Vicinity of Grand Canyon National Park, a Notice of Availability of Proposed Commercial Air Tour Routes for the Grand Canyon National Park and Request for Comments, and the Draft Environmental Assessment for this Notice. As mentioned above, this NPRM is issued concurrently with a final rule published elsewhere in this part of this issue of the Federal Register. Based on Notice No. 96-11, the final rule adds a new subpart to part 93 to codify and revise the provisions of Special Federal Aviation Regulation (SFAR) No. 50-2, Special Flight Rules in the Vicinity of Grand Canyon National Park.

DATES: Comments must be received on or before March 31, 1997.

ADDRESSES: Comments on this NPRM should be mailed, in triplicate to: Federal Aviation Administration, Office of the Chief Counsel, Attention: Rules Docket (AGC-200), Docket No. 28770, 800 Independence Avenue, SW., Washington, DC 20591. Comments may also be sent electronically to the Rules Docket by using the following Internet address: nprmcmts@mail.faa.dot.gov. Comments must be marked Docket No. 28770. Comments may be examined in the Rules Docket in Room 915G on weekdays between 8:30 a.m. and 5:00 p.m., except on Federal holidays.

FOR FURTHER INFORMATION CONTACT: Mr. Thomas L. Connor, Mgr, Technology Division, AEE-100, Office of Environment and Energy, Federal Aviation Administration, 800 Independence Avenue, SW., Washington, DC 20591; Telephone: (202) 267-8933. For the draft Environmental Assessment contact Mr. William J. Marx, Division Manager, ATA-300, Federal Aviation Administration, 800 Independence Avenue, SW., Washington, DC, 20591; Telephone: 202-267-3075.

SUPPLEMENTARY INFORMATION:

Comments Invited

Interested persons are invited to participate in this proposed rulemaking by submitting such written data, views, or arguments as they may desire. Comments relating to the environmental, energy, federalism, or economic impact that may result from adopting the proposals in this notice are also invited. Comments that provide the factual basis supporting the views and suggestions presented are particularly helpful in developing reasoned regulatory decisions. Communications should identify the regulatory docket number and be submitted in triplicate to the above specified address. All communications and a report summarizing any substantive public contact with FAA personnel on this rulemaking will be filed in the docket. The docket is available for public inspection both before and after the closing date for receiving comments.

Before taking any final action on this proposal, the Administrator will consider all comments made on or before the closing date for comments, and the proposal may be changed in light of the comments received.

The FAA will acknowledge receipt of a comment if the commenter includes a self-addressed, stamped postcard with the comment. The postcard should be marked "Comments to No. 28770." When the comment is received by the FAA, the postcard will be dated, time stamped, and returned to the commenter.

Availability of the NPRM

Any person may obtain a copy of this NPRM by submitting a request to the Federal Aviation Administration, Office of Rulemaking, 800 Independence Avenue SW., Washington, DC 20591, or by calling (202) 267-9677. Communications must identify the notice number of this NPRM. Persons interested in being placed on a mailing list for future FAA NPRM's should request a copy of Advisory Circular No. 11-2A, Notice of Proposed Rulemaking Distribution System, which describes application procedures.

An electronic copy of this document may be downloaded using a modem and suitable communications software from the FAA regulations section of the Fedworld electronic bulletin board service (telephone: 703-321-3339) or the Federal Register's electronic bulletin board service (telephone: 202-512-1661). Internet users may reach the FAA's webpage at http://www.faa.gov or the Federal Register's webpage at http://www.access.gpo.gov/su_docs for access to recently published rulemaking documents.

History

Beginning in the summer of 1986, the FAA initiated regulatory action to address increasing air traffic over Grand Canyon National Park (GCNP). On March 26, 1987, the FAA issued Special Federal Aviation Regulation (SFAR) No. 50 (subsequently amended on June 15, 1987; 52 FR 22734) establishing flight regulations in the vicinity of the Grand Canyon. The purpose of the SFAR was to reduce the risk of midair collision, reduce the risk of terrain contact accidents below the rim level, and reduce the impact of aircraft noise on the park environment.

In 1987, Congress enacted Public Law 100-91, commonly known as the National Parks Overflights Act. The Act stated, in part, that noise associated with aircraft overflights at GCNP was causing "a significant adverse effect on the natural quiet and experience of the park and current aircraft operations at the Grand Canyon National Park have raised serious concerns regarding public safety, including concerns regarding the safety of park users."

Section 3 of Public Law 100-91 required the Department of the Interior (DOI) to submit to the FAA recommendations to protect resources in the Grand Canyon from adverse impacts associated with aircraft overflights. The law mandated that the recommendations: (1) Provide for substantial restoration of the natural quiet and experience of the park and protection of public health and safety from adverse effects associated with aircraft overflight; (2) with limited exceptions, prohibit the flight of aircraft below the rim of the canyon; and (3) designate flight-free zones except for purposes of administration and emergency operations.

In December 1987, the DOI transmitted its "Grand Canyon Aircraft Management Recommendation" to the FAA, which included both rulemaking and nonrulemaking actions. Public Law 100-91 required the FAA to prepare and

issue a final plan for the management of air traffic above the Grand Canyon, implementing the recommendations of the DOI without change unless the FAA determined that executing the recommendations would adversely affect aviation safety. After the FAA determined that some of the DOI recommendations would adversely affect aviation safety, the recommendations were modified to resolve those concerns.

On May 27, 1988, the FAA issued SFAR No. 50–2 revising the procedures for operation of aircraft in the airspace above the Grand Canyon (53 FR 20264, June 2, 1988) SFAR No. 50–2 established a Special Flight Rules Area (SFRA) from the surface to 14,499 feet above mean sea level (MSL) in the area of the Grand Canyon. The SFAR prohibited flight below a certain altitude in each of five sectors of this area, with certain exceptions. The SFAR established four flight-free zones from the surface to 14,499 feet MSL above large areas of the park. The SFAR provided for special routes for commercial sightseeing operators, which are required to conduct operations under part 135, as authorized by special operations specifications. Finally, the SFAR contained certain terrain avoidance and communications requirements for flights in the area.

A second major provision of section 3 of Public Law 100–91 required the DOI to submit a report to Congress "* * * discussing * * * whether [SFAR No. 50–2] has succeeded in substantially restoring the natural quiet in the park; and * * * such other matters, including possible revisions in the plan, as may be of interest." The report was to include comments by the FAA "regarding the effect of the plan's implementation on aircraft safety." The Act mandated a number of studies related to the effect of overflights on parks. The National Park Service (NPS) took longer than originally anticipated to complete the studies because many of the issues involved are on the cutting edge of technical and scientific capability. According to the NPS, measuring natural quiet is different from measuring levels of aircraft noise. On June 15, 1992, the FAA promulgated a final rule to extend the expiration date of SFAR No. 50–2 to June 15, 1995, while the NPS studies and analyses were being conducted (57 FR 26764).

On September 12, 1994, the DOI submitted its final report and recommendations to Congress. This report, entitled, "Report on Effects of Aircraft Overflights on the National Park System," was published in July 1995. The Report recommended numerous revisions to SFAR No. 50–2 that are described below. The NPS Report was based on more than 20 separate studies. These studies included acoustical measurements from GCNP sites, GCNP visitor surveys, noise dose-visitor response analyses, and noise modeling of commercial sightseeing aircraft overflying GCNP using FAA survey data.

The Report concluded that the SFAR had not fully resulted in the substantial restoration of natural quiet in the Grand Canyon, despite the improvements it brought. Further, as of 1994, only about 34 percent of the park could be said to experience a substantial restoration of natural quiet, and that this would drop to little more than 10 percent by the year 2000 if growth continued at the same level as predicted. Only when the NPS made larger flight-free zones and, more importantly, substituted quieter aircraft into the scenario modeled for 2010, was achievement of a substantial restoration possible. The NPS Report to Congress clearly states that reducing noise at the source, as in the use of quieter aircraft, is the most important ingredient in achieving the substantial restoration of natural quiet in the Grand Canyon.

On June 15, 1995, the FAA published a final rule that extended the provisions of SFAR No. 50–2 to June 15, 1997 (60 FR 31608). This action allowed the FAA sufficient time to review the NPS recommendations and to initiate and complete any appropriate rulemaking action.

President Clinton, on April 22, 1996, issued a Memorandum for the Heads of Executive Departments and Agencies to address the significant impacts on visitor experience in national parks. Specifically, the President directed the Secretary of Transportation to issue proposed regulations for the Grand Canyon National Park placing appropriate limits on sightseeing aircraft to reduce the noise immediately and make further substantial progress toward restoration of natural quiet, as defined by the Secretary of the Interior, while maintaining aviation safety in accordance with Public Law 100–91.

In response to the President's directive, on July 31, 1996 (61 FR 40120; Notice No. 96–11), the FAA published an NPRM to reduce the impact of aircraft noise on Grand Canyon National Park (GCNP) and to assist the NPS in achieving its statutory mandate imposed by Public Law 100–91 to provide for the substantial restoration of natural quiet and experience in GCNP. The NPRM proposed and requested comments on the following: (1) Modification of the dimensions of the GCNP SFRA; (2) Establishment of new flight-free zones and flight corridors, as well as modification of existing flight-free zones and flight corridors; (3) Proposed flight-free periods and/or an interim moratorium on additional commercial sightseeing air tours and tour operators; and (4) Establishment of reporting requirements for commercial sightseeing companies operating in the SFRA. In addition to these areas, the FAA sought comment on a number of questions and alternatives regarding curfews and caps on the number of aircraft and operations, as well as on the issue of quiet aircraft technology. The comment period for the proposed rule, originally set for 60 days, was subsequently extended for another 45 days as directed by the Congress in the Federal Aviation Authorization Act of 1996 (61 FR 54716; October 21, 1996). In addition several commenters requested additional time to analyze the complex components of the proposed rule.

On September 16–20, 1996, in Scottsdale, AZ, and Law Vegas, NV, the FAA held public meetings to obtain additional comment on the NPRM and on the draft environmental assessment. Comments and the transcripts of these meetings have been placed in the rulemaking docket for Notice No. 96–11.

The FAA received approximately 14,000 comments in response to the NPRM and the public meetings. The FAA has developed a final rule, based on Notice No. 96–11 and on the public comments to the notice, that is being issued concurrently with this NPRM published elsewhere in this part of this issue of the **Federal Register**.

Interagency Working Group

On December 22, 1993, Secretary of Transportation Federico Peña and Secretary of the Interior Bruce Babbitt formed an interagency working group (IWG) to explore ways to limit or reduce the impacts from overflights on national parks, including GCNP. Secretary Babbitt and Secretary Peña concur that increased flight operations at GCNP and other national parks have significantly diminished the national park experience for some park visitors, and that measures can and should be taken to preserve a quality park experience for visitors, while providing access to the airspace over national parks. The Secretaries see the formation of the working group and the mutual commitment to addressing the impacts of park overflights as the initial steps in a new spirit of cooperation between the two departments to promote an effective balance of missions. The FAA has been working closely with the NPS to identify and deal with the impacts of

aviation on parks, and the two agencies will continue to identify and pursue the most effective solutions. This close cooperation is necessary because the FAA has sole authority for control of the nation's airspace to ensure aviation safety and efficiency, while the NPS is charged with managing the natural and cultural resources in the national park system and providing for public enjoyment of those resources in such a manner that they are unimpaired for the enjoyment of future generations.

The FAA's role in the IWG has been to promote, develop, and foster aviation safety, and to provide for the safe and efficient use of airspace, while recognizing the need to preserve, protect, and enhance the environment by minimizing the adverse effects of aviation on the environment. The NPS' role in the IWG has been to protect public land resources in national parks, preserve environmental values of those areas, and provide for public enjoyment of those areas.

In March 1994, the two agencies jointly issued an advance notice of proposed rulemaking (ANPRM) seeking public comment on policy recommendations addressing the effects of aircraft overflights on national parks, including GCNP (59 FR 12740; March 17, 1994). The recommendations presented for comment included voluntary measures, altitude restrictions, flight-free periods, flight-free zones, allocation of noise equivalencies, and incentives to encourage use of quiet aircraft technology. On the issue of possible incentives for quiet aircraft technology, the ANPRM stated:

> Air tour operators could be encouraged to use relatively quiet aircraft on park overflights. For example, a flight corridor with a good scenic view of the canyon could be limited to aircraft meeting certain noise emission standards. An air tour operator could find it advantageous to convert its entire fleet to such quiet aircraft to incorporate that corridor in its tours. While there is no Federal requirement for aircraft to be manufactured to produce less noise than Stage 3 standards, some aircraft appropriate for air tour operations are quieter than Stage 3. Increased use of such aircraft in air tours would achieve noise mitigation through reducing noise levels on the surface of the park, although this option does not address issues other than noise.

In response to the ANPRM, the FAA received 30,726 comments, including duplicate form letters and several petitions with multiple signatures; the FAA received 24,510 submissions of one form letter with comments addressing the GCNP. Of the total number of comments, 1,975 were distinct letters. This NPRM will discuss only those comments that relate to establishing aircraft noise limitations at GCNP. The remainder of the comments relating to the above noted recommendations may be addressed in a later rulemaking.

Of the 644 comments that specifically addressed GCNP, 337 commenters opposed, while 232 commenters supported, further regulation. Commenters included members of State and local governments; congresspersons; helicopter operators; Native Americans and other individuals; and aviation, environmental, and recreational organizations and associations.

A number of commenters addressed the issue of quiet aircraft technology. Commenters opposing additional regulation of aircraft noise levels argued that quieter aircraft are expensive and incentives to invest in this technology are needed. Alternatively, commenters said that noise budgets are too complex and will not work. Commenters supporting additional regulation urged that incentives to minimize noise per passenger should be established or that an aircraft noise budget should be created. Specifically, a few commenters supported the unconditional adoption of quiet aircraft technology. One commenter suggested dividing aircraft into noise producing classes, with the higher noise class airplanes facing greater restrictions. Other commenters suggested requiring mufflers for all aircraft. The majority of the comments received on this issue, however, raise concerns with the adoption of noise-reduction technology. Many commenters stated that the cost of quiet plane technology is prohibitive at this time. Some commenters suggested adopting noise abatement equipment as it becomes affordable. Other commenters suggested using financial incentives—such as tax incentives, fee abatements, loan programs, and increased allocation on the number of flights allowed—to encourage operators to use quiet aircraft. One commenter stated that quiet aircraft technology is not an adequate solution for the overflight problem because such aircraft retain impacts and risks other than noise. Another commenter argued that exploring quiet aircraft technology at this time is not a worthwhile endeavor because technology will not be able to address the noise problem in the near future. Another commenter stated that, as an example for commercial operators, those agencies conducting airflights over Noise Sensitive Areas should be required to integrate quieter aircraft into their fleets.

Since the issuance of the joint ANPRM and the formation of the IWG, the FAA and NPS have been working closely to identify and deal with the impacts of aviation on GCNP, and the two agencies will continue to identify and pursue effective solutions. In this spirit of cooperation, the agencies plan to take the following nonregulatory and regulatory actions to achieve the substantial restoration of natural quiet in GCNP.

In addition to the rulemakings concerning GCNP, the IWG is working to develop a nationwide strategy for addressing noise for the national park system, and the FAA will be issuing a rule for limiting noise at Rocky Mountain National Park.

Public Meetings

The FAA has held several public meetings in an effort to obtain public input for the development of additional actions to reduce the impact of aircraft noise on GCNP and assist the NPS in its efforts to restore natural quiet and experience in the park.

On June 28, 1995, the FAA and the NPS jointly published a notice announcing a public meeting to provide the interested parties with an opportunity to comment on improving SFAR No. 50–2 (60 FR 33452). The meeting, held on August 30, 1995, in Flagstaff, AZ, yielded 62 speakers representing air tour operators, environmentalists, government, tourist boards, corporations, Native American tribes, and other individuals. An additional 349 public comments were subsequently received during the comment period that ended on September 8, 1995.

On September 16–20, 1996, in Scottsdale, AZ, and Las Vegas, NV, the FAA held public meetings to obtain additional comment on the NPRM and on the Draft Environmental Assessment for the final rule that is published elsewhere in this issue of the Federal Register. Comments and the transcripts of these meetings have been placed in the rulemaking docket for that final rule.

Congressional Hearings

On October 10–11, 1996, Congressional hearings were held by the Aviation Subcommittee of the Senate Committee on Commerce, Science, and Transportation at Las Vegas, Nevada, and Tempe, Arizona. The hearings were held to gather testimony from various entities involved in or affected by the FAA's proposed special flight rules over the Grand Canyon (Notice No. 96–11). Senator John McCain of Arizona made opening statements at both field hearings indicating that they were there

to examine the impacts of the proposed rules and the Draft Environmental Assessment. He hoped the FAA would provide appropriate incentives for quiet air technology in the final rule.

The Nevada Congressional delegation (Senator Bryan and Congressman Ensign in person, Senator Reid and Congresswoman Vucanovich by proxy) indicated, at the Las Vegas hearing, their opposition to Notice No. 96–11 as written, noting safety concerns as well as ones related to economics, NEPA compliance, and the lack of quite air technology incentives.

The issues raised by Senator McCain and other members of the Arizona delegation were also addressed by others testifying at the field hearings. There were points (and often counterpoints) raised as to the effectiveness of SFAR 50–2 in substantially restoring natural quiet in the Grand Canyon, as mandated by Public Law 100–91; the NPS's definition of substantial restoration of (50 percent or more of the park quiet at least 75 percent of the time); methodology involved in measuring and modeling noise impacts; potential impacts of the new rule on safety in the SFRA; effects of the new rule on general aviation; potential adverse impacts of the rule on the economy of Las Vegas and Nevada; the adequacy of the consultation process with Native American tribes; and controls on other uses of the park vis-a-vis air tour overflights.

Many of the air tour operators, some of whom had also voiced concerns about the safety implications of Notice No. 96–11, predicted dire economic consequences for the industry if the NPRM, which included possible caps on operations, curfews, and two additional flight-free zones, went into effect. In response to the operators' economic worries, Senator McCain reminded them that they had unanimously opposed his bill, which became Public Law 100–91, in 1987, claiming that it would put the entire industry out of business. Instead, he noted, the number of air tour overflights of Grand Canyon had increased from approximately 40,000 per annum in 1987 to the 95,000 reported by the Arizona Republic newspaper for the 12-month period which ended September 30, 1996.

Aside from a commitment to air safety, perhaps the only issue on which all of the interests represented at the field hearings appeared to agree was the need for quiet air technology incentives for both manufacturers and air tour operators. From Senator McCain and members of the Nevada Congressional delegation to the Native American tribal leaders and from environmental groups to air tour operators and aircraft manufacturers, as well as aviation and tourism industry representatives, quieter air technology incentives were viewed as integral to efforts to substantially restore natural quiet to the Grand Canyon while maintaining a viable air tour industry. Among specific suggestions made were providing more attractive routes to quieter aircraft, setting aside a portion of air tour overflight fees to provide loans to air tour operators to invest in further quiet air technology, and lowering fees for those operators using quieter aircraft.

The FAA has considered the statements made at the hearings in developing this proposed rule.

Consultation With Affected Native American Tribes

Three Native American reservations border GCNP, and several additional tribes have cultural ties to the Grand Canyon. The DOT and DOI recognize that before taking any action, they have an obligation to consult with these tribes on a government-to-government basis. The consultation process, begun with the development of the proposed and final rule for the reduction of aircraft noise on GCNP, will continue with this process.This will include a continuing dialogue with tribes potentially affected by this proposal and will include direct meetings as well as written consultation. Initial steps have been taken to contact potentially affected tribes of this proposal based on the government-to-government relationships.

Relationship to Final Rule Published Concurrently

As mentioned above, the FAA has developed a final rule, based on Notice No. 96–11 and on the public comments to the notice, that is being issued concurrently with this NPRM as published elsewhere in this part of this issue of the **Federal Register**.

Notice No. 96–11 proposed and requested comments on the following: (1) Modification of the dimensions of the GCNP Special Flight Rules Area (SFRA); (2) Establishment of new flight-free zones and flight corridors, as well as modification of existing flight-free zones and flight corridors; (3) Proposed flight-free periods and/or an interim moratorium on additional commercial sightseeing air tours and tour operators; and (4) Establishment of reporting requirements for commercial sightseeing companies operating in the SFRA. In addition to these areas, the FAA sought comment on a number of questions and alternatives regarding curfews and caps, as well as on the issue of quiet aircraft technology. The final rule for Notice No. 96–11 addresses all of these areas except for the issue of quiet aircraft technology. The FAA did not include requirements on quiet aircraft technology in the final rule, because Notice 96–11 did not propose specific measures on that subject; instead the FAA requested comments and information that would allow the FAA to develop a specific proposal. Based on a review of the comments on quiet technology received on Notice No. 96–11, summarized below, the comments received at the FAA and Congressional public meetings, the comments received on the ANPRM published in 1994, and the NPS Report to Congress, the FAA is issuing this NPRM. Comments received to date on quiet technology will be considered in conjunction with comments submitted in response to this proposed rule.

Comments Concerning Quiet Technology

One commenter states that the largest operators at the Grand Canyon have either converted to quiet technology or are in the process of converting.

Papillon says that quieter aircraft is the solution to the problems raised in the NPRM and, in addition to describing the current technology available, recommends establishing a time frame for transition to quiet technology; establishing guidelines to qualify aircraft as quiet; and encouraging and assisting tour operators to convert their fleets to quiet technology aircraft.

Sierra Club-Grand Canyon Chapter says that the goal should be to completely phase in quiet technology aircraft over the next 10 to 15 years, with no increase and even a decrease in the number of flights. This commenter says that new aircraft should not be louder than the aircraft they replace and that if a noise budget approach is developed, there should be a reduction factor.

The National Parks and Conservation Association (NPCA) asserts the necessity of incorporating quiet flight technology into the rule by noting that sound can travel 13 to 16 miles laterally from aircraft and penetrate deeply into flight-free areas.

A river tour company notes the use of the Thrush TurboPro for drug interdiction. This commenter believes that if the demand were created for "hush kits" on smaller aircraft via FAA rulemaking, manufacturers would develop and produce this type of technology at cheaper prices than are currently available.

Some commenters submitted technical information about quiet

aircraft that are currently available or being developed. In addition, at the Congressional hearing, the National Aeronautics and Space Administration (NASA) submitted information on research and development efforts (by NASA and the FAA) on quiet aircraft technology for propeller-driven airplanes and rotorcraft. The FAA has considered this information in developing this proposed rule.

Some commenters, such as the Grand Canyon Air Tour Association (GCATA), Twin Otter, and Grand Canyon Airlines say that the proposed rules in Notice No. 96–11 will make it difficult for small operators to generate the revenue to invest in quieter aircraft. These commenters (some of whom have already employed quieter, more expensive aircraft) recommend that incentives such as tax credits, preferred routes and altitudes, elimination of overflight fees, and no curfews or caps, be made available to tour operators who wish to invest in quieter aircraft. Twin Otter and Grand Canyon Airlines add that the use of quieter and larger aircraft would be beneficial by reducing the number of air tour operations required to carry the same number of passengers, which would further reduce noise levels.

Twin Otter and Grand Canyon Airlines recommend withdrawing the NPRM and replacing it with incentives for quiet aircraft technology. Another commenter says that the FAA should not take a regulatory approach; rather, government should work with private enterprise to develop quieter aircraft.

Some commenters (e.g., Grand Canyon Trust, Wilderness Watch, Wilderness Society, Grand Canyon River Guides) state that a stronger rule is needed that would provide incentives for conversion of the existing tour fleet to the quietest aircraft available. Grand Canyon Airlines recommends that interim milestones be set by which existing conventional air tour aircraft fleets are converted to quiet aircraft; these milestones could be similar in concept to those established in 14 CFR part 91 for air carrier compliance with 14 CFR part 36 for Stage 3 certification standards.

McDonnell Douglas Helicopter Systems (MDHS) supports offering economic incentives to encourage air tour operators to operate helicopters equipped with quiet technology. Since 1991, MDHS has provided many quiet technology "No Tail Rotor" (NOTAR) helicopters which are operating effectively in noise-sensitive environments. In addition to the types of incentives mentioned by other commenters (see above), MDHS recommends the use of airspace entry locations based on FAA noise certification data for each type of helicopter. MDHS also recommends that Federal government agencies operating within the national parks should set an example by acquiring and using quiet technology aircraft.

Another commenter suggests allowing those operators who own measurably quieter machinery a 5 percent credit on their allotted number of flight permits. According to the commenter, operators who persist in running noisy aircraft should be subject to penalties restricting their permits.

Another commenter suggests a fee per flight that would encourage the use of larger, quieter aircraft by multiplying that fee by the sound level. This commenter believes that if this is used in conjunction with a limitation on the number of total tour flights permitted, operators would be encouraged to use quieter aircraft.

A BIA representative says that requirements for high-technology quiet aircraft should provide a specific exemption to Native American tribes for any flights sanctioned by such Native American tribes over their own lands.

The FAA agrees that the use of quieter aircraft will, in the long run, provide the most benefit toward restoring natural quiet. As discussed later in this preamble, this proposal contains a phase out schedule for noisier aircraft, a requirement that newly acquired aircraft meet certain acoustic criteria, and an incentive for using quieter aircraft by allowing flights though the proposed National Canyon route to be conducted with only the aircraft that meet this acoustic criteria. The FAA has considered the comments received on Notice No. 96–11 in developing the specific proposals described below.

The FAA and NPS are working together to develop a long-term Comprehensive Noise Management Plan that will address the best available technology, provision of appropriate incentives for investing in quieter aircraft, and appropriate treatment for operators that have already made such investments. As discussed below under "Potential Further Action," the FAA and NPS solicit comments on the types of considerations that should be included in this plan. Both FAA and NPS are committed to the development of a noise management plan over the next 5 years.

The Proposal

This proposed rule has several purposes. The first would be to provide an incentive for the use of quieter aircraft within GCNP. The second would be to establish additional noise limitations to reduce further the impact of aircraft noise on the park environment in the GCNP. The third would lift for the quietest aircraft the immediate temporary cap placed on the number of aircraft permitted to be used for commercial sightseeing operations in GCNP.

National Canyon Corridor

The companion final rule published elsewhere in this part in this issue of the **Federal Register** expands the Toroweap/Shinumo Flight-free Zone to prohibit operations in the airspace area that is now used by operators for commercial sightseeing operations while flying from Las Vegas to Tusayan. This proposal would establish a corridor, referred to as the National Canyon Corridor, within the newly expanded Toroweap/Shinumo Flight-free Zone that would enable operators using GCNP Category C aircraft (the quietest category of aircraft, as discussed below) to reinitiate commercial sightseeing operations along this route from Las Vegas to Tusayan without having to circumnavigate the Toroweap/Shinumo Flight-free Zone.

Phase-Out of Noisier Aircraft

In addition, the purpose of this proposal is to establish additional noise limitations to reduce further the impact of aircraft noise on the park environment in the Grand Canyon National Park. This proposal would accomplish this goal by a combination of requirements that would limit future use of noisier aircraft and that would provide incentives for the use of quieter aircraft. As discussed below, the proposed phase out of the GCNP Category A aircraft would provide a major reduction in noise by the end of the year 2000 and make a major contribution toward achieving the Congressional mandate of substantial restoration of natural quiet. Modeling shows that, if the phase out is adopted as proposed, the substantial restoration objective would be exceeded by 2008. The subsequent phase out of GCNP Category B aircraft would ensure continued restoration of natural quiet, as required by the NPS, even when projected numbers of additional GCNP Category C aircraft are added to the commercial sightseeing fleet.

The FAA has evaluated the noise exposure of existing aircraft used in the GCNP and has divided those aircraft into three categories based on noise per passenger or "noise efficiency": GCNP Category A aircraft includes the least noise efficient aircraft currently in use for sightseeing operations in the vicinity

of the Grand Canyon National Park; GCNP Category B aircraft includes aircraft more noise efficient than Category A aircraft but less noise efficient than the quietest aircraft now available; and GCNP Category C aircraft includes affected aircraft which are the quietest currently available. A detailed discussion of the technological basis for these categorizations is in the following section of this preamble, entitled "Quiet Technology for GCNP."

This proposal would in effect prohibit any further acquisition of GCNP Category A aircraft for use in the SFRA by persons conducting sightseeing operations. Current operators with Category A aircraft could continue to use that number of GCNP Category A aircraft listed on the operator's operations specifications on December 31, 1996, but that use of GCNP Category A aircraft would have to end on or before December 31, 2000.

Current operators of GCNP Category B aircraft would be allowed to continue to use that number of aircraft listed on the operating specifications as of December 31, 1996, and on or before December 31, 2000, as a replacement for GCNP Category A aircraft, but would be required to phase out all of those aircraft on or before December 31, 2008. The proposed phase out schedule would require that on or before December 31, 2002, at least one-quarter of the number of Category B aircraft listed on the operator's operations specifications on December 31, 2000, (the base level) would have to be phased out. The remaining Category B aircraft would have to be phased out in 25 percent increments so that no more than 50 percent of the base level aircraft would be in use after December 31, 2004, 25 percent after December 31, 2006, and all Category B aircraft would have to be phased out on or before December 31, 2008. During the period of time after the effective date of a final rule and on or before December 31, 2000, an operator could replace Category A aircraft with Category B or C aircraft but only on a one-for-one basis.

While the proposed rule would allow the continued use of Categories A and B aircraft by current certificate holders as described above, all aircraft used by new entrants to the affected sightseeing area would have to meet Category C requirements. This means that any person who wants to establish an aircraft sightseeing operation in the affected area after the effective date of a final rule would have to use only Category C aircraft. Also, all new aircraft acquired by present operators above the total number of Category A and B aircraft listed on the operations specifications of each operator on December 31, 1996, would have to be Category C aircraft.

The FAA is soliciting comments on all aspects of the proposed phase-out plan, including the affected aircraft, the schedule and percentage of aircraft that would be affected by any such plan. Comments focusing on the economic and environmental impact of the proposed phase-out would be beneficial.

Comments on Alternative Proposal

Comments are particularly requested on a potential alternative to the proposal to allow an operator to replace Category A aircraft with either Category B or Category C aircraft. Under the alternative, Category A aircraft could only be replaced by Category C aircraft. No interim replacement by Category B would be permitted. Because this would hasten the elimination from the GCNP of all aircraft other than Category C, it is likely to achieve the goal of attaining natural quiet more rapidly than the primary proposal set forth in this notice. This alternative was not incorporated into the current proposal, however, because the FAA's preliminary analysis suggests that it could be significantly more costly to operators. (See the Appendix to the Regulatory Evaluation contained in the docket.) These costs could be particularly burdensome to small entities.

However, if the additional costs of a direct transition from Category A to Category C are lower than they currently appear, and substantial additional environmental benefits may be obtained at reasonable cost, the final rule adopted in this proceeding could incorporate the alternative approach. Before taking final action, therefore, the FAA intends to further refine its cost estimates and the likely burden on small operators. Toward that end, it would be especially helpful if commenters provide specific cost and environmental projections that compare the impact of the primary proposal with the alternative. The FAA requests answers to the following questions, along with any other relevant information commenters wish to provide. Please note that comments accompanied by specific data about costs and/or environmental effects will be more useful than arguments of a general nature.

- From a business economic standpoint, would allowing the interim conversion of Category A aircraft to Category B be less burdensome than direct conversion to Category C?
- Does the cost of Category C aircraft exceed the cost of Category B aircraft? If so, by how much? What options other than direct purchase of Category C aircraft would be available that may have an effect on the economics of conversion?
- What is the availability of used Category C aircraft, and how could the acquisition of used aircraft mitigate the cost of the alternative?
- Are there business reasons that would cause operators to choose to replace Category A aircraft with Category C, even if Category C aircraft are more expensive than Category B aircraft? For example, would the subsequent need to phase out Category B make the option of an interim step undesirable in any event? Similarly, do Category C aircraft offer advantages in operating efficiency, marketability of air tours, repair costs, or other factors that would reduce the overall cost differences between acquiring Category B and Category C aircraft?
- Would other methods of analysis that include such factors as the cost of capital, long-term tax consequences, and other factors be more useful in determining the economic impacts of the conversion? If so, how should those factors be taken into account?
- What would be the noise-reduction consequences of requiring a direct transition from Category A to Category C? The replacement of Category A aircraft (by either Category B or Category C) is likely to make the greatest contribution toward the restoration of natural quiet. Insofar as quantification is possible, it would be useful to understand how much additional benefit could be obtained by going directly to Category C.

Removal of Temporary Cap

Under the companion final rule published today, an immediate temporary cap is placed on the number of aircraft permitted to be used by each operator for commercial sightseeing operations in the Grand Canyon SFRA. If this notice is adopted as proposed, a cap on the total number of Category A and Category B aircraft permitted to operate in GCNP would remain in effect. However, the cap on Category C aircraft would be lifted. As a result, the fleet size of Category C aircraft could grow, subject to safety considerations, market-based considerations, or recommendations from the Comprehensive Noise Management Plan. For a more detailed discussion of this issue, see "Potential Further Action" below.

Quiet Technology for GCNP

This section of the preamble is a summary of a technical paper describing the methodology for classifying noise characteristics for aircraft operating in

GCNP. The full document has been placed in the docket for this rulemaking and is available for viewing and comment as described above under **ADDRESSES**. To obtain a copy of this document, contact the person listed under **FOR FURTHER INFORMATION CONTACT**.

Introduction

In response to comments in the docket for Notice No. 96–11 and those made at public hearings, FAA redoubled its efforts to develop concepts which would provide incentives for tour operators to invest in the best available noise abatement technology. Traditionally, the FAA uses its regulatory authority to impose more stringent national noise standards when it has been determined to be appropriate. By law when deciding on further noise stringency, FAA must ascertain whether the proposal is technologically feasible, economically reasonable, and appropriate to aircraft type. Based upon a joint FAA/NASA research report to Congress on quiet technology [1] and earlier work prepared for the third meeting of the Committee on Aviation Environmental Protection (CAEP) under the International Civil Aviation Organization (ICAO), the FAA determined that the imposition of new national and international noise standards for propeller-driven small airplanes and helicopters is not appropriate at this time. While there is ongoing research by the Federal government to identify future noise abatement technology, current aircraft designs already incorporate most of the available technology within economic reasonableness. At GCNP, there are substantive differences in the noise characteristics of the air tour aircraft in use. Therefore, FAA looked to non-traditional concepts which could offer some incentive for tour operators to improve the GCNP situation.

Noise Efficiency Concept

One theme expressed by some commenters was that the use of quieter, larger aircraft would provide two-fold benefits in reducing noise of each operation and reducing the number of operations to carry the same number of passengers. This theme fits in nicely with the FAA's general policy of using cumulative aircraft noise as an appropriate measure of the potential impact as it accounts for both the number of flights and intensity of their noise. The FAA began to explore noise efficiency concepts as an incentive for operators to utilize aircraft equipped with the best available noise abatement technology in the park. The following attributes were used in judging potential concepts:

- Is based on aircraft noise certification (14 CFR part 36).
- Judges fixed- and rotary-wing aircraft on a common basis.
- Correlates with aircraft performance and operation at GCNP.
- Offers basis for incentives.
- Is manageable.

In addition to these attributes, the concept must be shown to be economically reasonable.

Links to Aircraft Noise Certification

Levels obtained from aircraft noise certification represent the highest quality of data available. The flight tests are conducted under controlled conditions with an FAA representative or designee in attendance to witness the test setup and test activities. Data obtained during these tests are corrected to standard reference conditions as prescribed in 14 CFR part 36. FAA publishes these levels in Advisory Circular 36–1, "Noise Levels for U.S. Certificated and Foreign Aircraft." The current version of this AC is 36–1F dated 6/5/92. Unfortunately there is no single method applicable to all aircraft for determining the certificated noise level. Depending on date of application for type certificate and whether the aircraft is a helicopter or airplane, the noise level could have been obtained from one of 4 different tests, Appendices F, G, H, and J of 14 CFR part 36.

Because these noise certification procedures contain differences in aircraft operation, measurement altitudes, and units of noise, it is not possible to directly compare Appendix F, G, H, and J noise levels. However, FAA has developed a procedure for: (1) Extrapolating from the controlled conditions of a certification test to the operating conditions at GCNP and (2) converting levels to a common noise unit, thus making it possible to judge fixed- and rotary-wing aircraft on a common basis under conditions that pertain to air tour operations over GCNP. Sound Exposure Level (SEL) was selected as the common noise unit. SEL is a basic building block in calculating Equivalent Sound Level (L_{eq}) which is the measure of cumulative noise exposure that FAA is using to assess noise impacts in GCNP. (L_{eq}) is the most common method used to quantify time-varying noises. The Federal government uses a form of equivalent sound level, Day Night Sound Level (DNL), to quantify aircraft noise exposure in the vicinity of airports.

Noise Efficiency Measure

These extrapolation procedures for predicting noise levels applicable to Appendices F, H, and J of 14 CFR part 36 enable one to directly compare propeller-driven small airplanes and helicopters. There is no extrapolation procedure for Appendix G. The noise efficiency criterion for Appendix G noise levels was derived by a method that is explained later. In keeping with the theme of developing a noise efficiency concept, the extrapolated noise levels were examined as a function of the number of seats of the aircraft in the fleet of air tour aircraft operating at GCNP. Since the principal business of these aircraft is to carry sightseers over the park, the number of passenger seats is a logical production (or efficiency) factor.

When the aircraft noise levels are plotted against the number of passengers, there appears to be a break or gap between groups of aircraft that support some NPS findings on "quiet aircraft." The NPS report to Congress identifies the DHC–6–300 Twin Otter ("Vistaliner" version), the Cessna Caravan I, and the McDonnell Douglas "No Tail Rotor" (NOTAR) helicopters as the quietest aircraft currently operating at GCNP. The report further states that NPS expects that these aircraft would qualify under a "quiet aircraft" category.

A line of a demarcation can be drawn between the quietest aircraft and the rest of the air tour fleet. The two components of the line are: (1) Horizontal until greater than 2 passenger seats, and (2) increasing slope at 3 dB per doubling of number of seats. The line is horizontal until the number of seats is greater than 2 because a review of aircraft specification data found that two is the least number of passenger seats found on an aircraft that had been operated as an air tour aircraft in GCNP. Specifying a limit that increases with the number of seats is consistent with FAA's philosophy of rewarding efficiency by allowing aircraft which carry more passengers to emit more noise, thus creating less noise per passenger. For example, the slope of Appendix H noise limit increases at the rate of 3 decibels per doubling of weight. For aircraft in these weight ranges, 3 dB per doubling of number of seats is a comparable growth rate to 3 dB per doubling of weight. Figure 1 shows noise levels of many of the air tour aircraft against the number of passenger seats in the aircraft.

[1] Report of the FAA and NASA to the U.S. Congress Pursuant to Section 308 of the FAA Authorization Act of 1994, "Quiet Aircraft Technology for Propeller-driven Airplanes and Rotorcraft," June 1996.

The area below the solid line in Figure 1 is proposed as the potential objective in the encouragement of compatible noise abatement technology for air tour operations in GCNP. This area is labeled "C" and the aircraft whose SELs fall within this region are "GCNP Category C aircraft." Another dotted line is plotted at 4 decibels above the solid line in Figure 1 which creates two new areas each covering 4 decibels and evenly splits the number of air tour aircraft into these two zones. The two new areas are labeled "A" and "B." Aircraft whose noise levels fall within these new zones are identified as GCNP Category A and GCNP Category B aircraft, respectively. An examination of a recent count of air tour aircraft finds that there are 57 GCNP Category A aircraft, 56 GCNP Category B, and 23 GCNP Category C aircraft operating at GCNP.

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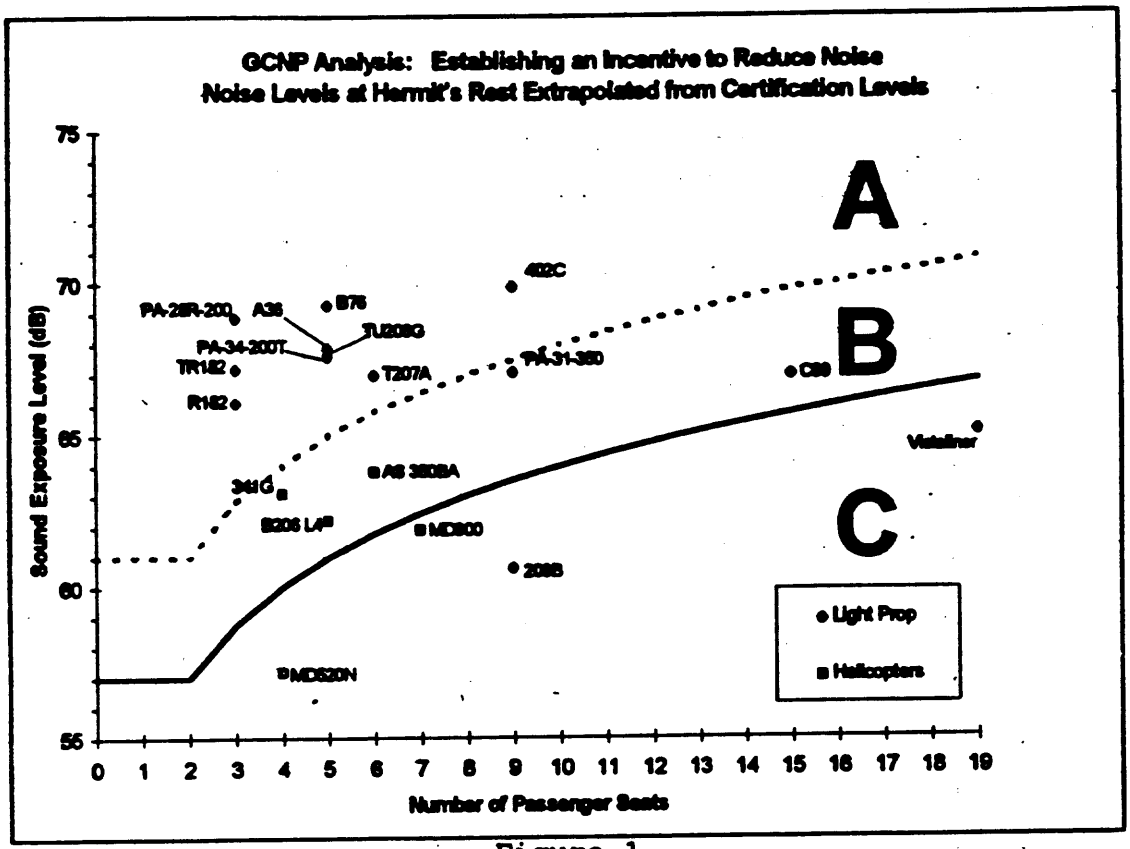

Figure 1

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Noise Efficiency Criteria

The curves in Figure 1 demonstrate the general concept and are the bases for the noise efficiency criteria. A workable criterion should be easy to apply and manage in the field and should be understandable to the operators and general public. The airport community has many years of experience using the certificated noise levels published in FAA's AC 36–1F. These data have been used to establish use restrictions, curfews, and noise budgets at some airports in the country. The certificated noise levels are not only available in advisory circulars which are updated and published periodically but the levels are readily available to the aircraft owners from the aircraft flight manuals (AFM). Thus the development of noise efficiency criteria based on certificated noise levels is proposed not only because of the precedent, but it also eliminates the need for someone in the field to perform the mathematical extrapolation from certification to GCNP conditions by the method that was outlined in the section "Links to Aircraft Noise Certification."

By reversing the process that determined the noise levels in Figure 1, the two lines in Figure 1 are translated into three GCNP noise efficiency criteria for Appendices F, H, and J. These are shown in Figures 2a, 2b, and 2c, respectively. The figures also contain the equations for the GCNP Categories B and C noise efficiency criteria or noise limits. These are the criteria for compliance with the proposed regulation.

As stated earlier, this study did not discover a method to successfully extrapolate Appendix G noise levels to GCNP conditions. When FAA promulgated Appendix G to supersede Appendix F, the change was to replace the level flyover test with a takeoff test. The Appendix G noise limit is 5 decibels higher than the Appendix F noise limit to account for difference in measured noise levels obtained under the different test conditions. Applying that philosophy to this situation, a noise efficiency criterion for Appendix G noise levels can be derived by adding 5 decibels to the criteria for Appendix F. There is no figure in this paper, similar to Figures 2a–c, showing the Appendix G noise efficiency criteria because all of the propeller-driven airplanes currently operating at GCNP predate the promulgation of Appendix G of 14 CFR part 36. The equations of the noise efficiency criteria for Appendix G are found in Appendix B of the proposed rule.

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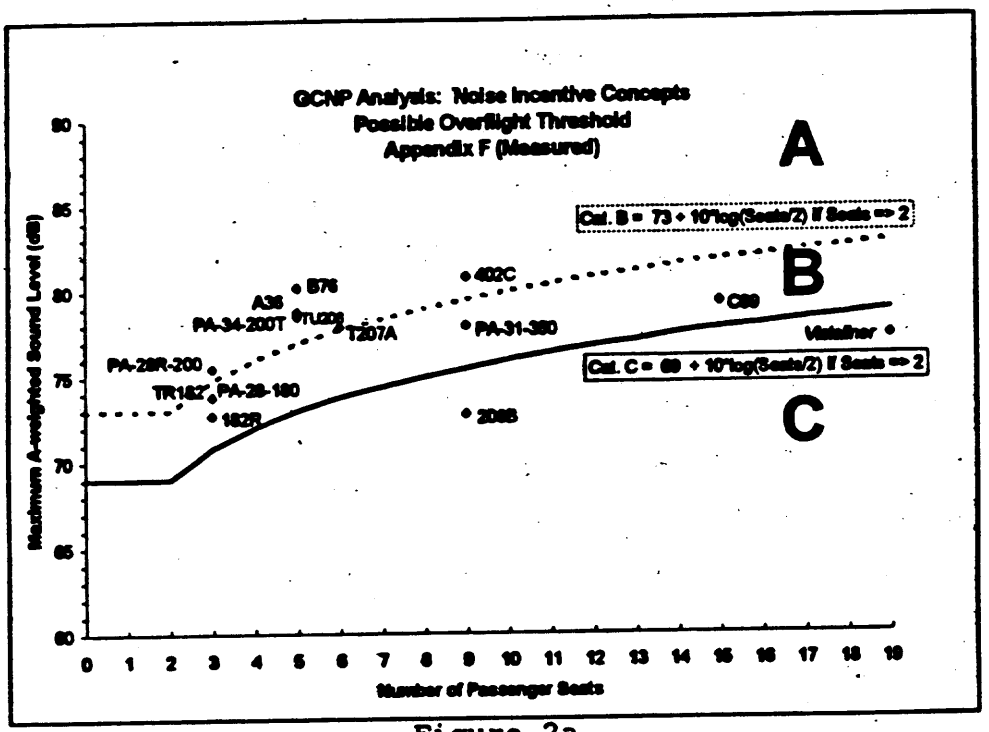
GCNP Analysis: Noise Incentive Concepts
Possible Overflight Threshold
Appendix F (Measured)
A
B
C
Cat. B = 73 + 10*log(Seats/2) If Seats => 2
Cat. C = 69 + 10*log(Seats/2) If Seats => 2
Maximum A-weighted Sound Level (dB)
Number of Passenger Seats
B76
402C
C99
A36
PA-34-200T
TU206
T207A
PA-31-350
Vistaliner
PA-28R-200
TR182
PA-28-180
182R
208B

Figure 2a

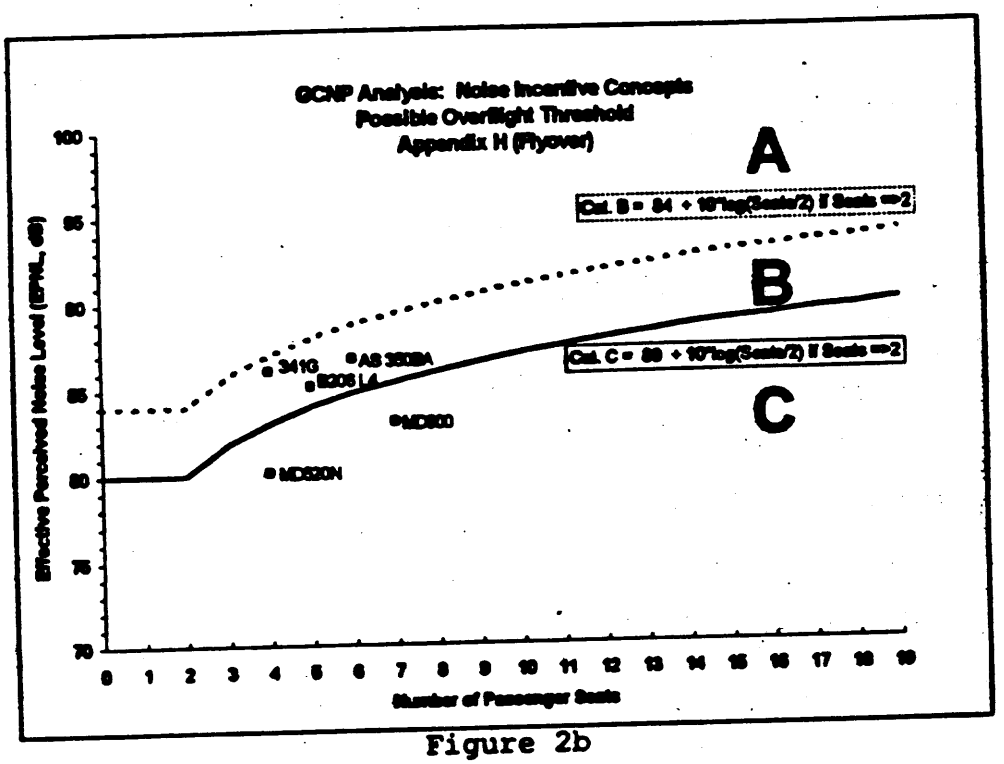

Figure 2b

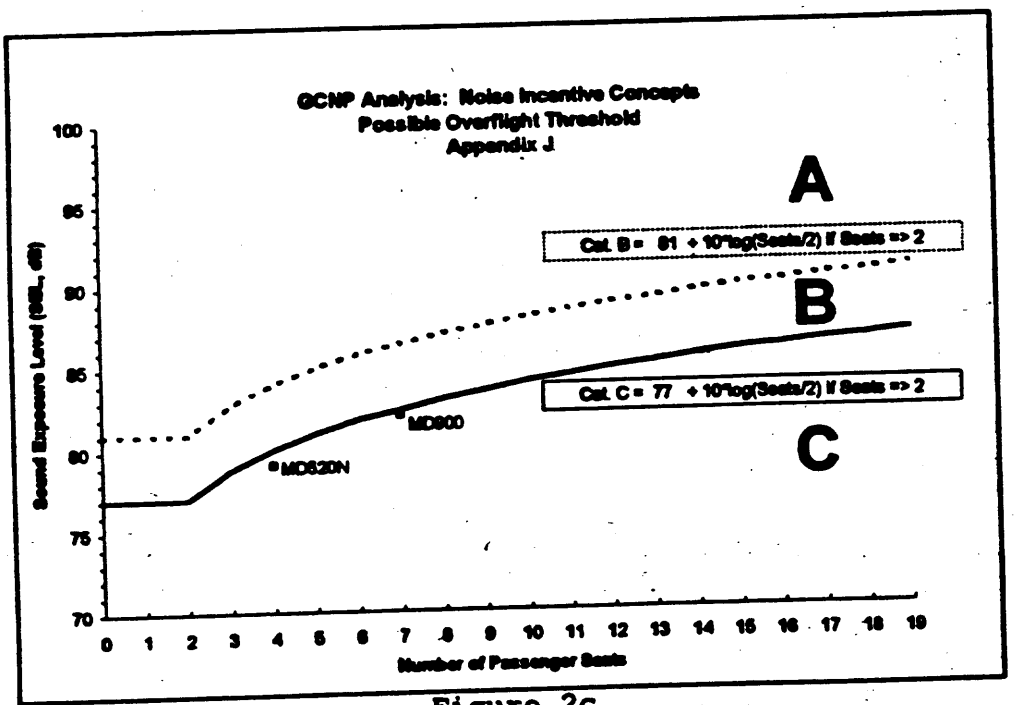

Figure 2c

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Implementation

The proposed GCNP aircraft noise incentive concept links to the aircraft noise certification provisions prescribed in 14 CFR part 36. The incentive criteria will be based upon the noise levels obtained under noise certification conditions. The use of noise certification levels will provide an ability to judge fixed- and rotary-wing aircraft on a common basis.

New aircraft are subject to the provisions of 14 CFR part 36 including the requirement to conduct a noise certification test under controlled conditions. This test is conducted in accordance with an FAA approved test plan and is typically witnessed by FAA personnel unless delegated to an FAA designee. Some aircraft, depending on the date of type certification, were not subject to the noise certification provisions of 14 CFR part 36. Thus noise certification levels are unknown. In the strict sense certification noise tests should be required to establish noise levels for comparative purposes against the GCNP aircraft noise efficiency criteria.

The FAA does not have the authority to mandate that those older aircraft conduct such tests for compliance with the provisions of 14 CFR part 36. However, in order to fully implement the GCNP aircraft noise incentive concept, noise certification levels or estimates of those levels under certification conditions will be required.

Considering the overall cost associated with conducting noise certification tests and establishing noise certification levels it is proposed to offer a hierarchy of noise level data source options for establishing noise levels to fully implement the GCNP aircraft noise incentive concept. FAA plans to publish an Advisory Circular (AC 36–XX) that will facilitate the determination of the noise levels for the GCNP noise efficiency criteria. This AC would list all aircraft operating at Grand Canyon National Park as determined from operations specifications. Noise levels would be specified for each aircraft listed in the AC.

In some cases the noise levels listed in this proposed AC would be the actual FAA approved noise certification levels documented in the FAA approved airplane or rotorcraft flight manuals. These level are typically provided in FAA AC 36–1 and would simply be referenced in the proposed GCNP AC. In other cases where noise certification under 14 CFR part 36 was not required, the noise level could be provided to the FAA by the operator or owner following the hierarchy described below. The owner or operator would have to substantiate to the FAA that the estimated noise level is representative for the subject aircraft.

The following hierarchy of noise level data sources would be documented in the proposed AC and used for all aircraft in determining the noise level for the GCNP aircraft noise incentive concept:

1. US certifications under 14 CFR part 36 with noise certification levels obtained from the FAA approved flight manuals or FAA AC 36–1.

(a) For propeller driven small airplanes the applicable hierarchy of regulations are:

(1) 14 CFR part 36 Appendix F.

(2) 14 CFR part 36 Appendix G.

(b) For helicopters the applicable hierarchy of regulations are:

(1) 14 CFR part 36 Appendix J.

(2) 14 CFR part 36 Appendix H.

2. Foreign certifications under ICAO Annex 16, Volume I with noise certification levels obtained from the approved flight manuals or data approved by the foreign civil aviation authorities, or FAA AC 36–1.

(a) For propeller driven small airplanes the applicable hierarchy of regulations are:

(1) ICAO Annex 16, Volume I Chapter 6.

(2) ICAO Annex 16, Volume I Chapter 10.

(b) For helicopters the applicable hierarchy of regulations are:

(1) ICAO Annex 16, Volume I Chapter 11.

(2) ICAO Annex 16, Volume I Chapter 8.

3. Research or other measurement test data obtained under controlled conditions, documented and corrected to the certification conditions of Appendix F for small propeller driven airplanes and Appendix J for helicopters. Preference would be placed on those data obtained under certification-like conditions and/or those data collected under an FAA sponsored noise research test.

4. FAA approved noise estimation methods that can estimate Appendix F noise levels for small propeller driven airplanes and Appendix J noise levels for helicopters. Currently the following methods may be suitable for use pending FAA approval on a case by case basis.

(a) For propeller driven small airplanes: Method in Section 2.2 of DOT/FAA/AEE–82–1.

(b) For helicopters: SAE/AIR 1989.

As one moves down on the hierarchy the expected level of substantiation (as the representative noise certification level-estimated) by the operator or owner would increase, and the level of FAA scrutiny should be expected to increase.

The resulting noise levels will vary depending upon an operator's or owner's situation related to the above hierarchy. In the case of helicopters the noise levels will be the flyover noise certification level in the noise metric of Effective Perceived Noise Level (EPNL) (14 CFR part 36, Appendix H) or Sound Exposure Level (SEL) (14 CFR part 36, Appendix J). In the case of small propeller-driven airplanes the noise levels will be the flyover (14 CFR part 36, Appendix F) or takeoff (14 CFR part 36, Appendix G) noise certification level in the noise metric of maximum A-weighted sound level. It is estimated that noise levels for virtually all aircraft currently operating in GCNP could be achieved without the need for a complete noise certification test.

All estimated noise certification levels provided in the proposed FAA AC 36–XX would be for the sole and specific purpose of determining compliance with Grand Canyon noise efficiency criteria.

NPS Air Operations

GCNP has one of the most strictly regulated aviation programs within the NPS and the DOI. The park limits use of its contracted aircraft to activities involving life or health-threatening emergencies, administration and/or protection of resources, and for individually approved special purpose missions. Each flight request is reviewed to ensure that it is the most efficient, economical, and effective method of performing the required task consistent with NPS and GCNP goals. These goals include the protection of natural quiet and experience, as reinforced by the park's recently approved General Management Plan. The NPS is revising its contract requirements so that it can contract for quieter aircraft that meet mission requirements, and it is addressing this in budget formulation as a high priority need. The NPS will, to the maximum extent possible, meet or exceed phase-out schedules for the air tour industry at large and will to the maximum extent feasible honor flight-free zones established for the Park. GCNP seeks to make this conversion in advance of the requirements of this rule.

Development of a Comprehensive Noise Management Plan

This proposed rule reflects the understanding of the FAA and NPS that the conversion of the commercial sightseeing aircraft fleet operating in the SFRA to a more noise efficient fleet is

the most promising approach to providing for the substantial restoration of natural quiet mandated by Public Law 100–91 and allowing for some measure of growth in the commercial sightseeing industry. To ensure that the proposed rule provides the fairest solution for all parties involved, the FAA and NPS are committed to the joint development of a noise management plan no later than 5 years from May 1, 1997. It will provide for a more adaptive management system, full resolution of all monitoring and modeling issues, improved public input, and the provision of improved incentives to invest in noise efficient aircraft. The purpose is to further refine the final rule published concurrently with this proposed rule, whose intent is to provide for the substantial restoration of natural quiet mandated by the Overflights Act. To ensure development of a flexible and adaptive approach to noise mitigation and management, this plan will, at a minimum, (1) address development of a reliable aircraft operations and noise database, (2) validate and document the most effective uses for FAA and NPS noise models in GCNP, (3) explore how the conversion to a noise efficient fleet can most effectively contribute to the substantial restoration of natural quiet while allowing for growth in the industry, and how, in this context, incentives can best be provided to promote this conversion. The FAA and the NPS are committed to an open process that will provide for full public involvement.

In the development of the Comprehensive Noise Management Plan, consideration will be given to the inclusion of additional reporting requirements. The final rule published elsewhere in this part of this issue of the Federal Register does not require that operators report on their commercial sightseeing operations and aircraft used with the SFRA beyond the year 2002. Some type of additional information after that time will be required. The FAA is requesting comments on the type of information and the method of collecting that information that would be most consistent with this plan. Comments will be considered during the development of the Comprehensive Noise Management Plan.

Potential Further Action

As proposed, the FAA would remove the temporary cap placed on certain aircraft permitted to be used for commercial sightseeing operations in GCNP. This is in response to the cap established by the companion final rule published elsewhere in this part in this issue of the Federal Register.

The proposed rule would permit operators conducting commercial sightseeing operations within the SFRA to replace GCNP Category A aircraft with GCNP Category B aircraft until December 31, 2000. According to the proposed requirements of the phase-out, the GCNP Category B aircraft could be used until December 31, 2008. Furthermore, the proposed rule allows the substitution of GCNP Category B aircraft with other GCNP Category B aircraft until December 31, 2008. In this context, should operators be restricted to replacing either GCNP Category A and B aircraft only with GCNP Category C aircraft?

As proposed in this notice, the removal of the cap would enable the fleet size to grow. Fleet conversion to larger and quieter aircraft provides for industry growth and noise reduction. But since there is ultimately some capacity level that is consistent with the substantial restoration of natural quiet, which the FAA and NPS will address in the development of a Comprehensive Noise Management Plan, the FAA is requesting specific comment on how to address this "capacity" issue:

—Should an overall cap on the fleet size be maintained until the Comprehensive Noise Management Plan is completed? Or should the number of Category C aircraft in the fleet be allowed to grow through random addition until it reaches the size recommended in the Comprehensive Noise Management Plan to be in concert with one that will maintain the substantial restoration of natural quiet in GCNP?

—At what size should the fleet be capped? What is the appropriate baseline to establish for imposition of a fleet cap? And if imposed, what would the effect be on transitioning to noise efficient aircraft? What provisions should be made for changes in technology that result in increased aircraft efficiency and sound reduction?

—Should incentives be included in a "flexible" cap that would permit increasing numbers of aircraft based on acquisition of leading edge noise efficient technology by operators? Should growth be tied to an incentive system for existing operators to convert their fleet to more noise efficient aircraft? For example, an operator converting two GCNP Category A aircraft to GCNP Category C aircraft could add an additional GCNP Category C aircraft, for a total of three GCNP Category C aircraft. And an operator converting three GCNP Category B aircraft would be permitted to add one additional GCNP Category C aircraft, for a total of four GCNP Category C aircraft.

—Should caps be applied more selectively to specific routes or corridors that are more noise-sensitive, such as the Dragon Corridor?

The FAA is specifically requesting comments on how to better protect areas adjacent to the Dragon Corridor, identified by the NPS as among the most noise-sensitive areas in the GCNP. To minimize the amount of noise from commercial sightseeing aircraft in the Dragon Corridor, the FAA solicits comments on the following alternatives:

- Removing the two-way loop permitted for helicopters in the Dragon Corridor and reinstating the two-way loop in the Zuni Corridor.
- Accelerating the proposed phase-out schedule for aircraft operating in the Dragon Corridor.
- Permitting only GCNP Category C aircraft to operate in two directions within the Dragon Corridor.

Environmental Review

The FAA has prepared a draft environmental assessment (EA) for this proposed action to assure conformance with the National Environmental Policy Act of 1969. A copy of this draft EA will be circulated to interested parties and placed in the docket, where it will be available for review. For those unable to view the document in the docket, the Draft EA can be obtained from the person listed in the FOR FURTHER INFORMATION CONTACT section listed previously. The comment period on the Draft EA will remain open for 90 days from the date of the publication of this Notice. Before the final rule is issued, the FAA will prepare a Final EA and determine whether a Finding of No Significant Impact may be issued or an environmental impact statement is required.

Regulatory Evaluation Summary

Changes to federal regulations must undergo several economic analyses. First, Executive Order 12866 directs Federal agencies to promulgate new regulations or modify existing regulations only if the potential benefits to society justify the costs. Based on the criteria outlined in E.O. 12866, the Department of Transportation has concluded that this rulemaking would constitute a "significant regulatory action" and, as such, must include an analysis of alternative actions. Second, the Regulatory Flexibility Act of 1980 requires agencies to analyze the

economic impact of regulatory changes on small entities. Finally, the Office of Management and Budget directs agencies to assess the effects of regulatory changes on international trade.

In conducting these assessments, the FAA has determined that the combined quantifiable and non-quantifiable benefits of the proposed rule would exceed costs. The FAA has also determined that the rule would not have any significant impact on international trade. In addition, the FAA has estimated that the rule would have a significant economic impact on a substantial number of small air tour operators. Therefore, a regulatory impact analysis is included as required by law. These analyses, available in the docket, are summarized below.

Introduction

This regulatory evaluation analyzes the costs and benefits of the proposed rulemaking to establish noise limitations for certain aircraft operations over the Grand Canyon National Park (GCNP). The FAA is proposing these limitations to reduce the impact of aircraft noise on the park environment and to assist the National Park Service in achieving its statutory mandate imposed by Public Law 100–91. Public Law 100–91 mandates for the substantial restoration of natural quiet and experience in GCNP. Responding to the law, this proposal would assure the achievement of that mandate through a combination of requirements that would limit the future use of noisier aircraft and provide incentives for the use of quieter aircraft. This NPRM is issued concurrently with a final rule which codifies and revises the provisions of Special Federal Aviation Regulation (SFAR) No. 50–2, Special Flight Rules in the Vicinity of Grand Canyon National Park.

Costs

The FAA estimates that the undiscounted cost of the proposed rule to be $172.6 million, with a present value of $96.7 million. This cost estimate was calculated for the 12-year period, 1997 to 2008, and would be incurred by operators conducting airtour operations at the GCNP. Most of this cost would result from operators having to ultimately replace their Category A and B aircraft with Category C aircraft. Each of the cost categories are described below. The assumptions used to calculate the costs are explained in detail in the full regulatory evaluation.[2]

The FAA has identified five cost components in the NRPM. These components and their respective costs are explained below.

Cost of Certifying Noise Efficiency

Four aircraft—CE–180, CE–206, PA–28–180, and BHT–206–B—predate the noise standard and, therefore, do not have certificated noise levels. To obtain a noise level to use to compare with the GCNP noise efficiency limit, either a computational analysis or a measurement test is required. The estimated costs for this are $18,750 for each aircraft type, and would occur in 1997, so the total cost would be $75,000 (net present value, $70,000).[3]

Cost of Phase-Out

Another cost of the NPRM is the eventual phase-out of Category A and Category B aircraft and replacement with Category C aircraft. Specifically, the cost represents the difference in value of existing aircraft and their replacements and the additional or differential expenses associated with operating the quieter aircraft.

Phase-Out of Category A for Category B Aircraft: The aircraft value differential was calculated by subtracting the value of Category A aircraft from the value of Category B aircraft. The operating cost differentials were similarly calculated and added over the period 1997 to 2000. These aircraft would subsequently need to be replaced by Category C aircraft between 2001 and 2008. The analysis assumes that each existing Category A aircraft would be replaced by a PA–31–350 by 2000, which would then be replaced by a Caravan by 2008. The cost of phasing out Category A for Category B aircraft (and subsequently for Category C aircraft) is $74 million, with a present value of $42 million.

The FAA considered the option of requiring phased-out Category A aircraft to be replaced directly with Category C aircraft instead of allowing operators to temporarily replace Category A aircraft with Category B aircraft. This option was rejected because requiring direct conversion to more expensive Category C aircraft would place a major economic burden on many small business operators during the first four years of the phase-out (1997–2000). The FAA estimates that $72 million more in costs would occur in this period as a result of this option than if transition to Category B was allowed. Some operators may choose to convert directly from Category A to Category C aircraft since it must be done by 2008 anyway, but allowing the flexibility to convert from A to B to Category C provides economic relief to those operators who need it most by allowing them to spread costs over a much longer period and generate additional revenues to offset these costs. Direct conversion from Category A to Category C results in some small earlier noise reductions in the Park, but both approaches lead to the same benefits by the year 2008.

Phase-Out of Category B for Category C Aircraft: The aircraft value differential was calculated by subtracting the value of Category B aircraft from the value of Category C aircraft. (See full regulatory evaluation for list of aircraft.) The operating cost differentials were similarly calculated and added over the period 2001 to 2008. The cost of phasing out Category B for Category C aircraft by 2008 is $62 million, with a present value of $34 million.

Cost of Non-Addition for Category A Aircraft

This non-addition cost is the cost associated with prohibiting additions of Category A aircraft that would otherwise occur in the absence of the proposed rule. It is the cost-differential between the price of Category B or C aircraft and Category A aircraft. From 1997 to 2000, all Category A aircraft would need to be converted to Category B aircraft. Thereafter, all Category A aircraft would have to become Category C aircraft. Twelve-year costs sum to $22 million with a present value of $12 million.

Cost of Non-Addition for Category B Aircraft

Similarly, non-addition cost for Category B aircraft is the cost associated with prohibiting Category B additions except for replacement of Category A aircraft. It is the cost differential between the price of Category B aircraft and a Category C aircraft had this proposed rule not been in place. This analysis makes the same aircraft substitutions that are shown in the table above in the section on "Phase-Out of Category B for Category C Aircraft." Total 12-year costs equal $14 million with a present value of $9 million.

Benefits

The benefits of noise reduction attributable to this rulemaking can be broadly categorized as use and non-use benefits. Use benefits are the benefits perceived by individuals from the direct

[2] As required by the Office of Management and Budget (OMB), the present value of this stream was calculated using a discount factor of 7 percent. All dollar values are expressed in 1995 dollars.

[3] While it is possible in the future that another aircraft would be introduced into the GCNP that does not have a certified noise level, such a situation is impossible to predict. All Category B and C aircraft that this analysis assumes airtour operators would convert to have certified noise levels, so no additional costs are anticipated in the future for this cost component.

use of a resource such as hiking, rafting, or sightseeing. Non-use benefits are the benefits perceived by individuals from merely knowing that a resource is preserved in a given state. For example, GCNP clearly has value to people who have not visited the park, but take pleasure from the knowledge of its existence. It also has value to people who may wish to visit the Park at some future date. The non-use benefits attributable to this rulemaking have not been estimated but are described qualitatively. The use benefits of this rulemaking have been estimated and are presented below.

The Final Rule revising SFAR 50–2 contains certain overflight restrictions. The benefits of those restrictions have been estimated and are reported in the Final Rule. The NPRM would further amend SFAR 50–2 and the additional benefits are estimated here. The same methodology and some of the same data used to estimate benefits for the Final Rule are also used to estimate benefits in the NPRM.

Economic studies have not been conducted specifically to estimate benefits for the NPRM. Benefits are, therefore, estimated for analogous situations combining value estimates from existing economic studies with site-specific information related to GCNP and other information. Certain criteria should be applied to ensure that appropriate studies are selected. Those criteria are:

- Selected economic studies must reasonably represent the resources to be valued in terms of physical characteristics, service flows, user characteristics, and available substitutes;
- Selected economic studies must be scientifically sound. Studies that are either published in a peer-reviewed academic journal or are conducted by a recognized university-associated researcher or established consulting firm are considered to be scientifically sound; and
- Selected economic studies must use appropriate valuation methodologies.

The site-specific information used in the benefits estimation includes visitation data for GCNP and a visitor survey conducted to document the visitor impacts of aircraft noise within GCNP. The available visitation data for GCNP permits the categorization of visitors into the following groups: backcountry users, river users, and other visitors. "Other visitors" includes those sightseeing, picnicking, pleasure driving, etc. National Park Service estimates for the number of visitor-days in 1995 for these visitor groups are as follows:

NUMBER OF VISITOR-DAYS IN 1995

Visitor group	Visitor days
Backcountry	115,478
River	168,602
Other	5,517,720
Total	5,801,800

The GCNP visitor survey indicates that these different visitor groups are variously affected by aircraft noise (HBRS, Inc. and Harris Miller Miller & Hanson, Inc. 1993). This survey asked respondents to classify the interference of aircraft noise with their appreciation of the natural quiet of GCNP as either "not at all," "slightly," "moderately," "very much," or "extremely." The percent of visitors indicating these impacts is presented below by visitor group.

VISITORS AFFECTED BY AIRCRAFT NOISE IN GRAND CANYON NATIONAL PARK

Impact	Backcountry visitors[a] (percent)	River visitors[b] (percent)	Other visitors (percent)
Not At All	41.0	45.5	76.0
Slightly	15.0	16.5	11.0
Moderately	13.5	10.0	4.0
Very Much	14.5	12.5	4.0
Extremely	16.0	15.5	5.0

[a] Average for Summer and Fall users.
[b] Average for motor and oar users.
Source: HBRS, Inc. and Harris Miller Miller & Hanson, Inc. 1993.

The economic studies selected for use in the benefit estimation are listed below. These studies value recreational activities in or near GCNP. All dollar amounts are indexed to 1995. The implicit price deflator for GDP was used to index all values (Survey of Current Business, March 1996).

VISITOR-DAY VALUES

Activity	Study[4]	Consumer surplus per visitor-day
Hiking in Arizona	Martin, Russell, and Smith 1974	$43.16
Multi-Day Rafting in Grand Canyon Natl Park	Boyle, Welsh, and Bishop 1988	128.21
Sightseeing in Bryce Canyon Natl Park	Haspel and Johnson 1982	39.71

[4] Reported in Walsh, Johnson, and McKean 1988.

Consumer surplus is the difference between the maximum amount a consumer is willing to pay and what the consumer actually pays. It is a measure of the increase in well-being gained by individuals through participation in recreational activities.

It was assumed that these visitor-day values represent the value of participating in the indicated activities at GCNP absent any impacts from aircraft noise. It should be noted that these values potentially understate the value of participation absent any impacts from aircraft noise to the extent that they were estimated in conditions where aircraft noise was present.

There is no economic study available that estimates the reduction in the value of participation that is attributable to the "slightly," "moderately," "very much," or "extremely" impacts described in the GCNP visitor survey. Therefore, the following reductions were assumed. The results of a sensitivity analysis using lower percentage reductions are reported below.

ASSUMED REDUCTIONS IN VISITOR-DAY VALUES

Impact	Reduction (percent)
Slightly	20
Moderately	40
Very Much	60
Extremely	80

The total lost value for each category was calculated as the product of the number of visitor-days, the proportion

of visitors affected by aircraft noise, the visitor-day value, and the assumed proportional reduction in the visitor-day value. For example the total lost value for river users that were moderately affected is the product of the number of river visitor-days (168,602), the proportion of river users that were moderately affected by aircraft noise (10.0 percent), the visitor-day value for river use ($128.21), and the assumed reduction in the visitor-day value given a moderate impact (40 percent).

Based on the number of visitors to the park in each use category, these data and assumptions imply the following total lost values from all aircraft noise in 1995 as noted in the table below. Approximately 58 percent of these benefits were estimated to be obtained by the final rule revising SFAR 50–2. That leaves approximately 42 percent of the total available for this NPRM.

TOTAL LOST VALUE FROM ALL AIRCRAFT NOISE IN 1995

Impact	Backcountry visitors	River visitors	Other visitors	Total
Slightly	$149,509	$716,677	$4,819,884	$5,686,070
Moderately	269,116	868,700	3,505,370	4,643,186
Very Much	433,576	1,628,812	5,258,055	7,320,443
Extremely	637,905	2,692,969	8,763,425	12,094,299
Total				29,743,998

The benefit of the proposed rule is that portion of the total lost value that is associated with the resulting noise reduction. Aircraft noise modeling has produced a measures called L_{eq12}, which is a non-linear form. Determining a linear measurement of noise reduction weighted by ground area over different levels requires calculation of the antilog of the contour levels. This process produces an estimated sound energy level that can be compared linearly over varying ground areas. The noise reduction results for this NPRM are presented below.

Average linearized noise measure, weighted by the square miles over which different levels, are predicted to occur according to the following schedule:

Year	No NPRM	With NPRM	Noise reduction (percent)
1997 ..	1,268.33	1,277.70	−0.74
2000 ..	1,268.33	1,087.83	14.23
2008 ..	1,268.33	685.96	45.92

The 45.92% noise reduction by the year 2008 corresponds to the finding in the environmental assessment of this proposed rule that 57.4 percent of the GCNP area will have achieved natural quiet as defined by NPS.

The indicated reduction in aircraft noise for each year was applied to the total lost value from all aircraft noise. Subtracted from that application is the amount applied as estimated benefits for the final rulemaking revising SFAR 50–2. That product yields the current use benefit for that year.

Linear interpolation was used to estimate benefits between the years 1997 to 2000, and 2000 to 2008. A 3 percent discount rate was then applied to calculate the present value of use benefits over the ten year regulatory evaluation period. The economics literature supports a 3 percent discount rate for natural resource valuation (e.g., Freeman 1993). Recent Federal rulemakings also support a 3 percent discount rate for natural resource valuation (61 FR 453; 61 FR 20584). The total indicated benefits represent approximately 22 percent of the total benefits available. The resulting use benefit estimates are presented in the following table.

INDICATED USE BENEFITS OF THE OVERFLIGHT NPRM

Year	Current value	Present value
1997	$(106,234)	$(103,140)
1998	598,389	564,039
1999	1,279,091	1,170,549
2000	1,869,864	1,661,350
2001	2,324,027	2,004,726
2002	2,749,363	2,302,548
2003	3,145,872	2,557,881
2004	3,513,553	2,773,632
2005	3,852,408	2,952,550
2006	4,162,436	3,097,244
2007	4,443,637	3,210,178
2008	4,696,011	3,293,688
Total		25,485,244

It is important to recognize significant uncertainties in this estimation. One uncertainty relates to the percentage reductions in visitor-day values that can be attributed to aircraft noise. It was assumed above that there is a 20 percent reduction for visitors affected "slightly," a 40 percent reduction for visitors affected "moderately," a 60 percent reduction for visitors affected "very much," and an 80 percent reduction for visitors affected "extremely." In recognition of the uncertainty surrounding this assumption, one-half of these percentage reductions were used to calculate an alternative benefit estimate. Additionally, in recognition of the discount rate recommended in OMB Circular A–94, alternative benefit estimates were calculated using a 7 percent discount rate. These alternative benefit estimates are presented below.

ALTERNATIVE USE BENEFITS ATTRIBUTABLE TO THIS NPRM

[Present value, 12 years]

Visitor day value reduction assumption (slightly, moderately, very much, extremely)	Discount rate	
	3 percent	7 percent
20, 40, 60, 80	$25,485,000	$18,795,000
10, 20, 30, 40	12,979,473	9,572,011

The FAA and the NPS believe that the true representation of benefits from the proposed rule are reflected by the three percent discount rate and the visitor day value reduction of 20%, 40%, 60%, 80% with the resulting value of 25,485,000, and that value is used to represent the use benefits of this proposal.

In addition to these use benefits, this rulemaking would likely generate non-use benefits. Although the FAA and the NPS have not attempted to estimate the magnitude of these benefits, non-use benefits have been documented and estimated in the general proximity of the Grand Canyon. In a study relating to the operation of Glen Canyon Dam (Hagler Bailly Consulting 1995), annual non-use benefits in a range from $2,286.4 million to $3,442.2 million were estimated based on a national

survey. No attempt has been made to relate these non-use benefit estimates to the potential non-use benefits of aircraft noise reduction that would occur as a result of this proposal. However, these estimates do suggest that potentially significant non-use benefits can be attributed to this proposed rulemaking.

National Canyon Corridor

The GCNP Final Rule, which is being simultaneously promulgated with this proposal, will expand one of the park's flight free zones and eliminate the Blue 1 route. The NPRM would reopen that route (redesignated as Blue 1A) to airtour operators, provided they use Category C aircraft.

The FAA estimates that the revenues potentially lost from eliminating the old Blue 1 route, and included as an average cost of $2.3 million per year in the GCNP Final Rule, would be increasingly recovered throughout the period 1997–2008 as a result of the proposal as operators phase out Categories A and B aircraft and replace them with Category C aircraft.[5] In 1997, the FAA estimates that about 28 percent of the flights between Las Vegas and Tusayan would be conducted using Category C aircraft and would, therefore, use the new Blue 1A route. The remaining air tour flights between Las Vegas and Tusayan would not include a flight through the Blue 1A route and would have a reduced fare. This percentage would increase each year as Categories A and B aircraft are phased out. By 2001 approximately half of the flights between Las Vegas and Tusayan will be conducted using Category C aircraft, and therefore, fly the Blue 1A route. By 2008, the proposed deadline for complete phase out for Categories A and B aircraft, all flights would be conducted using Category C aircraft.

REDUCTION IN REVENUE LOSS

Year	Current value	Present value
1997	$566,259	$529,214
1998	663,459	579,491
1999	754,727	616,082
2000	778,156	593,651
2001	1,180,220	841,480
2002	1,616,147	1,076,907
2003	1,987,803	1,237,904
2004	2,365,380	1,376,673
2005	2,447,181	1,331,104
2006	2,532,784	1,287,539
2007	2,757,791	1,310,207
2008	2,848,798	1,264,900
Totals	20,498,704	12,045,152

The FAA estimates that the recovered lost revenue (net of variable operating costs) attributable to the proposed rule would increase from $556,000 in 1997 to $2.8 million in 2008. The current values and seven percent discounted values are shown in the table above.

The FAA estimated natural resource benefits, discounted at three percent, for the 12-year period 1997–2008 to be $25.5 million. The FAA also estimated non-resource benefits (increased airtour operator profits), discounted at seven percent, for the 12-year period to be $12.0 million. The combined total benefit of this proposal, therefore, is estimated to be $37.5 million.

Summary of Costs and Benefits

The total quantified costs of this proposal to establish noise limitations for certain aircraft operated in the vicinity of the GCNP are estimated to be $172.6 million undiscounted or $96.7 million discounted to present value.

The quantified benefits, including noise reduction and use of the Blue 1A scenic route, are estimated to be $47.4 million undiscounted and $37.5 million discounted to present value. In addition to quantified benefits, there are substantial unquantified benefits as discussed above.

However, estimates of costs and benefits of the proposal were made primarily as an aid in evaluating the economic impacts of a phase-out that the FAA believes is necessary to obtain substantial reductions in aircraft noise in GCNP. The benefits justifying the restoration of natural quiet to the park have already been established by the American public, and that determination was carried out by their elected representatives in enactment of the law directing that natural quiet be restored. Based on that direction and the quantified and unquantified costs and benefits contained in this analysis, the FAA finds this proposal to be cost beneficial.

Alternatives

As explained in the Introduction of this regulatory evaluation, the proposed rule has been deemed "significant" due to its high cost and the impact it would have on small entities. As a result, the FAA has identified and considered alternatives to the proposed rule. Alternative 1 is the proposed rule. Alternative 2 is to not undertake rulemaking at this time beyond the final rule being implemented simultaneously with this proposal. Alternative 3 is the same as Alternative 1, but with no interim phase-out of Category B aircraft. Operators would presumably hold on to their aircraft until the last minute and replace them at the end of 2000 or 2008 depending on what type of aircraft they had.

Cost of Alternatives

A side-by-side cost comparison of Alternatives 1 and 3 is presented in the table below. Alternative 2 would have no cost and is therefore not included. Alternatives 1 and 3 have the same total cost because the same type and number of aircraft would be replaced under both alternatives. However, operators would have a longer time in which to comply under Alternative 3 than under Alternative 1. Therefore, the present value of the cost of that compliance would be less.

COST COMPARISON OF ALTERNATIVES 1 AND 3

Cost categories	Alternative 1		Alternative 3	
	Total cost	Present value	Total cost	Present value
Certified Noise Efficiency Level	$0.08	$0.07	$0.08	$0.07
Phase Out Category A to B	74.33	42.06	74.33	33.99
Phase Out Category B to A	60.92	33.49	60.92	27.05
Non-Addition Category A	21.76	11.87	21.76	9.68

[5] See Notice of Availability of Proposed Air Tour Routes published in the **Federal Register** with this NPRM.

COST COMPARISON OF ALTERNATIVES 1 AND 3—Continued

Cost categories	Alternative 1		Alternative 3	
	Total cost	Present value	Total cost	Present value
Non-Addition Category B	14.07	8.42	14.07	7.07
Total	171.16	95.91	171.16	77.86

Benefits of Alternatives

The benefits of Alternative 1 have already been estimated in the Benefits section above. There are no benefits to Alternative 2 since it merely maintains the status quo.

Alternative 3 would require the same conversion as that required in alternative 1, except that phase-out would not be required. As with the cost analysis, this benefits analysis assumes that all operators of Category A aircraft would wait until the year 2000 to convert their aircraft to Category B. Also, it is assumed that operators would wait until the year 2008 to convert their Category B aircraft to Category C aircraft because there would be no mandatory phase-out of Category B aircraft before 2008.

As with Alternative 1, the indicated reduction in aircraft noise for each year was applied to the total lost value from all aircraft noise. However, the indicated reduction remained constant at −0.74 percent from 1997 to 2000 and 14.23 percent from the years 2000 to 2008. In the year 2008, it is assumed the noise reduction reaches the indicated 45.92 percent. Subtracted from the application is the amount applied as estimated benefits for the final rule making revising SFAR 50–2. That product yields the current use benefit for that year. The annual current use benefits are presented in the following table two tables.

ALTERNATIVE 3.—INDICATED USE BENEFITS OF THE OVERFLIGHT NPRM

Year	Current value	Present value 3 percent
1997	$(106,234)	$(103,140)
1998	(103,931)	(97,965)
1999	(102,204)	(93,531)
2000	1,869,864	1,661,350
2001	1,818,071	1,568,284
2002	1,766,278	1,479,230
2003	1,714,486	1,394,034
2004	1,662,693	1,312,545
2005	1,610,901	1,234,621
2006	1,559,108	1,160,123
2007	1,507,315	1,088,917
2008	4,696,011	3,293,688
Total		13,898,156

The benefits of restoring the Blue 1A route for Alternatives 1, 2, and 3 are the same. As discussed above in the Benefits section, the benefits of implementing this route are $12 million over the 12-year period. When combined with the $13.9 million natural-resource benefits, the total present value benefits of Alternative 3 would be $25.9 million.

The following table compares the costs and benefits of the three proposals. The FAA has rejected Alternative 2 because it relies solely on the final rule issued concurrently with this NPFM to achieve the substantial restoration of natural quiet mandated by Congress. The NPS's definition of substantial restoration is the situation in which 50 percent or more of the Park is free of aircraft noise at least 75 percent of the time. Based on noise estimates contained in the environmental assessment associated with this proposal, the final rule would only marginally achieve these goals in 1997, and would begin to fall below the goal as activity increases in the future. The FAA believes that substantial further reductions in aircraft noise could be achieved by taking advantage of the advanced technology incorporated into quieter aircraft now available. Therefore, the agency rejects Alternative 2 in favor of one that is estimated to meet or exceed NPS standards for the immediate future.

The FAA has rejected Alternative 3 because, while similar to the proposal, it would impose no phase-out schedule for Category B aircraft beyond the requirement that they discontinue operations by December 31, 2008. Imposing no phase-out schedule was considered as a way to provide operators more flexibility in transitioning from Category B to Category C aircraft. A cost analysis of this alternative, based on the assumption that operators would delay phasing out Category B aircraft as long as possible, indicated that there would be a cost savings to operators only in that investment in some Category C aircraft would be delayed. On the other hand, the benefits of less aircraft noise in the Park would also be less during the transition period. Further, if operators actually did delay the phase-out until the last year, they would probably not be able to find suitable replacement aircraft or would have some other reason for requesting an extension of time. The FAA's experience in other rulemaking actions requiring a transition is that most operators do not wait until the deadline. Instead, they develop their own transition schedules. Based on the above, the FAA decided that establishing a transition schedule as contained the proposal would provide for a phase-out that will assure early benefits and can be effectively monitored. Therefore, the Agency rejects Alternative 3.

ALTERNATIVES COSTS AND BENEFITS COMPARISON

[Millions]

	Present value costs	Present value benefits	Benefit cost ratio
Alternative 1	$95.91	$37.5	.39
Alternative 2	0.0	0.0	N/A
Alternative 3	77.86	25.9	.33

Initial Regulatory Flexibility Analysis

By both law and executive order, Federal regulatory agencies are required to consider the impact of proposed regulations on small entities. Executive Order 12866 "Regulatory Planning and Review", dated September 30, 1993, states that:

Each agency shall tailor its regulations to impose the least burden on society, including individuals, businesses of different sizes, and other entities (including small communities and governmental entities), consistent with obtaining the regulatory objectives, taking into account, among other things, and to the extent practicable, the costs of cumulative regulations.

The 1980 "Regulatory Flexibility Act" (RFA) requires Federal agencies to prepare an initial regulatory flexibility analysis of any notice of proposed rulemaking that will have a significant economic impact on a substantial number of small entities. The definition

of small entities and guidance material for making determinations required by the RFA are contained in the Federal Register [47 FR 32825, July 29, 1982]. Federal Aviation Administration (FAA) order 2100.14A outlined the agency's procedures and criteria for implementing the RFA.

With respect to this proposed rule, a "small entity" is a commercial sightseeing operator that for all practical purposes owns or operates nine or fewer aircraft. A significant economic impact on a small entity is defined as an annualized net compliance cost to such a small commercial sightseeing operator. In the case of scheduled operators of aircraft for hire having less than 60 passenger seats, a "significant economic impact" or cost threshold, is defined as an annualized net compliance cost level that exceeds $69,800; for unscheduled operators the threshold is $4,900. A substantial number of small entities is defined as a number that is more than one-third of the small commercial sightseeing operators (but not less than eleven operators) subject to the proposed rule.

The Federal Aviation Administration has determined that this proposal could have a significant economic impact on all commercial sightseeing operators conducting flights within Grand Canyon National Park and therefore has prepared this initial regulatory flexibility analysis. The analysis, structured in accordance with section 603 of the RFA, requires the following:

1. Why FAA action is being considered.
2. Statement of the objectives and legal basis for the proposed rule.
3. Description of and estimated number of small entities affected.
4. Projected reporting, recordkeeping, and other compliance requirements of the proposed rule.
5. Any relevant Federal rules which may duplicate, overlap or conflict with the proposed rule.

Why FAA Action is Being Considered: The proposal to establish noise limitations for certain aircraft operations in the vicinity of the Grand Canyon National Park stems from the need to further reduce the impact of aircraft noise on the park environment and assist the National Park Service in achieving its statutory mandate imposed by Public Law 100–91 to provide for the substantial restoration of natural quiet and experience in the Grand Canyon National Park.

Statement of the Objectives and Legal Basis for the Proposed Rule: In 1987, Congress enacted Public Law (Pub. L.) 100–91, commonly known as the National Parks Overflights Act (the Act). The Act stated, in part, that noise associated with aircraft overflights at GCNP was causing a "significant adverse effect on the natural quiet and experience of the park and current aircraft operations at the Grand Canyon National Park have raised serious concerns regarding public safety, including concerns regarding the safety of park users."

Public Law 100–91 requires the Department of the Interior to submit to the FAA recommendations to protect resources in the Grand Canyon from adverse impacts associated with aircraft overflights. The law mandated that the recommendations: (1) Provide for substantial restoration of the natural quiet and experience of the park and protection of public health and safety from adverse effects associated with aircraft overflights; (2) with limited exceptions, prohibit the flight of aircraft below the rim of the canyon; and (3) designate flight-free zones except for purposes of administration and emergency operations. In December of 1987, the DOT transmitted its "Grand Canyon Aircraft Management recommendations" to the FAA, which included both rulemaking and nonrulemaking actions.

On May 27, 1988, the FAA issued SFAR No. 50–2 revising the procedures for operation of aircraft in airspace above the Grand Canyon (53 FR 20264, June 2, 1988). The SFAR, among other things, limited the areas for aircraft operations by establishing special flight routes for commercial operators. Since that time, a substantial amount of public debate has taken place regarding the effect of aircraft noise on the Grand Canyon's environment. The debate and the objective of the proposal is more thoroughly discussed in the preamble of this proposed rulemaking.

On June 15, 1995, the FAA published a final rule that extended the provisions of SFAR No. 50–2 to June 15, 1997 (60 FR 31608). This action allowed the FAA sufficient time to review thoroughly the NPS recommendations as to their impact on the safety of air traffic over GCNP, and to initiate and complete any appropriate rulemaking action.

On September 16–20, 1996, in Scottsdale, Arizona, and Las Vegas, Nevada, the FAA held public meetings to obtain additional comment on the NPRM. entitled "Special Flight Rules in the Vicinity of Grand Canyon National Park," and on the draft environmental assessment that accompanied that proposal. Comments and the transcripts of these meetings have been placed in rulemaking docket No. 28537 for Notice 96–11.

Description and Estimated Number of Small Entities Affected: The proposed rulemaking will affect commercial sightseeing operators conducting flights over the Grand Canyon National Park under 14 CFR part 135. These commercial operators provide sightseeing tours of the Grand Canyon over the four flight zones established by SFAR 50–2. FAA data shows that in 1995, there were 26 potentially affected small commercial sightseeing operators, each owning, but not necessarily operating 9 or fewer aircraft. These operators owned a total of 70 aircraft and the average fleet consisted of about 3 airplanes. The FAA estimated that 26 operators, which are also small entities, will be impacted by the proposed rules.

Projected Reporting, Recordkeeping, and Other Compliance Requirements of the Proposed Rule: The proposal would not require affected small commercial sightseeing operators to maintain and report additional information.

The proposed rule would require that operators phaseout noisier aircraft. The proposed rule would allow B category aircraft to replace phased out A category aircraft.

Any Relevant Federal Rules Which May Duplicate, Overlap or Conflict with the Proposed Rule: There are no relevant Federal rules which will duplicate, overlap or conflict with the proposed rule.

Cost of Compliance to Small Entities

The FAA has determined that four aircraft models currently operating in GCNP predate FAA noise standards and therefore do not have certificated noise levels. To obtain a level to use to compare with the Grand Canyon National Park noise efficiency limit may require analysis or a measurement test. Only four aircraft total operating at the Grand Canyon National Park (CE 180, CE 206, PA–28–180, and BT–206–B), do not have certificated noise levels. The cost per analysis or test is $18,750 or $2670 annualized at 7 percent over 10 years. In no situation would a substantial number of small operators be significantly impacted because the annualized cost is below even the lowest threshold for unscheduled operators and no operator owns more than one of these aircraft.

To calculate the annualized cost impact on a small operator of the phaseout schedule, the FAA in the regulatory evaluation determined the cost impact on operators by aircraft type. That is, given the fleet mix of a particular operator, the FAA calculated the cost of replacing a given noncompliant aircraft with a complaint one. The incremental annualized fixed

and variable costs of replacing noncompliant aircraft with compliant aircraft is shown in the following table.

The FAA has determined that, after multiplying the annualized incremental cost per aircraft type by the number of aircraft that operators currently own/or operate, 23 small entities would be significantly impacted under the guidelines outlined earlier. Therefore, a substantial number of operators affected by this proposed requirement (which is more than one-third of all GCNP commercial sightseeing operators) would incur a significant cost impact (See table in full regulatory evaluation.).

Description of Alternative Actions

Section 603(c) of the RFA requires that each initial regulatory flexibility analysis contain a description of any feasible alternatives to the proposed rule that would accomplish the stated objectives of applicable statutes and that minimizes any significant economic impact of the proposed rule on small entities.

The FAA and the NPS have made extensive efforts, including the public meeting at Flagstaff, to determine the optimal action to reduce aircraft noise and provide for the substantial restoration of natural quiet in the GCNP. In addition to this proposed rule's phaseout of operations of certain types of aircraft, the FAA and the NPS considered two other alternatives, described below.

Alternative Two

Under this alternative, the FAA would not issue an NPRM phasing out noisier aircraft at this time. Instead, the FAA would adopt an approach that would "wait-and-see" the extent to which promulgation of part 93, subpart U—Special Flight Rules in the Vicinity of Grand Canyon National Park, AZ, would reduce aircraft noise and provide for substantial restoration of natural quiet in the GCNP. Promulgation of part 93, subpart U, issued concurrently with this NPRM, will reduce aircraft noise in the park by establishing new and modifying existing flight-free zones and enlarging the Special Flight Rules Area.

Quieter, generally larger, aircraft are available, however, that would restore more of the natural quiet in the park. Based on an extensive review of all current information available, the FAA has concluded that the use of these quieter aircraft is necessary to reducing noise substantially more toward natural quiet, and that initiating a phase-out of noisier aircraft immediately will significantly contribute to achieving natural quiet goals. Therefore, the FAA rejects this alternative.

Alternative Three

Under this alternative, Category A aircraft would be banned after December 31, 2000, and Category B aircraft would be banned after December 31, 2008, just as in the proposal, but an interim compliance schedule would not be implemented to phase out Category B aircraft between 2001 and 2008. Although operators of Category B aircraft could replace their aircraft with Category C aircraft before the end of 2008, there would be no requirement to do so.

This alternative could postpone a further reduction in aircraft noise and postpone restoration of the natural quiet in the park during the period 2001–2008. Therefore, the FAA rejects this alternative.

International Trade Impact Assessment

The FAA has determined that the proposed rulemaking will not affect non-U.S. operators of foreign aircraft operating outside the United States or U.S. trade. It could however, have an impact on commercial sightseeing at GCNP, much of which is foreign.

The United States Air Tour Association estimates that 60 percent of all commercial sightseeing tourists in the United States are foreign. The Las Vegas FSDO, however, believes this estimate to be considerably higher at GCNP, perhaps as high as 90 percent. The FAA cannot put a dollar value on the portion of the potential loss in commercial sightseeing revenue associated with the loss of foreign tour dollars.

Federalism Implications

The regulations herein would not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government. Therefore, in accordance with Executive Order 12866, it is determined that this rule does not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

Paperwork Reduction Act

In accordance with the Paperwork Reduction Act of 1995 (Pub. L. 104–13), there are no requirements for information collection associated with the proposed regulation.

Conclusion

For the reasons set forth above, the FAA has determined that this proposed rule is a significant regulatory action under Executive Order 12866. In addition, the FAA certifies that this proposal would have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act. This proposed rule is considered significant under DOT Regulatory Policies and Procedures.

List of Subjects in 14 CFR Part 93

Air traffic control, Airports, Navigation (Air), Reporting and recordkeeping requirements.

The Proposed Amendment

For the reasons set forth above, the Federal Aviation Administration proposes to amend 14 CFR part 93 as follows:

PART 93—SPECIAL AIR TRAFFIC RULES AND AIRPORT TRAFFIC PATTERNS

1. The authority citation for part 93 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40103, 40106, 40109, 40113, 44502, 44514, 44701, 44719, 46301.

§ 93.305 [Amended]

2. Section 93.305 is amended by adding before the period at the end of paragraph (c) the words: "and not including the following airspace designated as the National Canyon corridor: that airspace one mile on either side of a line extending from Lat. 36°08'43" Long. 113°09'19" to Lat. 36°15'30", Long. 112°51'07" to Lat. 36°14'38", Long. 112°45'56" to Lat. 36°18'17", Long. 112°42'22" to Lat. 36°17'49", Long. 112°39'54" to Lat. 36°12'36", Long. 112°34'120" to Lat. 36°08'12", Long. 112°34'36" then back to the Blue One Direct Route at Havatagvitch Canyon Point.

3. Section 93.306 is added to read as follows:

§ 93.306 Operation of GCNP Category C Aircraft in National Canyon Corridor.

No person may operate an aircraft within the National Canyon Corridor within the Special Flight Rules Area unless the aircraft is a commercial sightseeing operation aircraft that meets the GCNP Category C aircraft standard, as defined in § 93.319.

§ 93.307 [Amended]

4. Section 93.307 is amended by adding at the end of the section after (b)(2)(iii) a new paragraph (b)(3) to read as follows:

* * * * *

(b) * * *

(3) GCNP Category C aircraft in the National Canyon Corridor. 7,500 feet MSL.

§ 93.316 [Amended]

5. Section 93.316 is amended by removing paragraph (b) and removing the paragraph designation "(a)" from the remaining paragraph.

6. Section 93.319 is added to read as follows:

§ 93.319 Noise limitations for commercial sightseeing flights.

(a) *Definitions.* For the purpose of this section only—

Base level for Category A aircraft means the total number of category A aircraft listed on a certificate holder's operations specifications on December 31, 1996, and for Category B aircraft means the total number of Category B aircraft listed on a certificate holder's operations specifications on December 31, 2000, for use in commercial sightseeing operations within the SFRA.

GCNP Category A aircraft means an aircraft that has not been shown to comply with the GCNP Category B or GCNP Category C noise limit in appendix B of this part.

GCNP Category B aircraft means an aircraft that has been shown to comply with the GCNP Category B noise limit in appendix B of this part, but not the GCNP Category C noise limit in appendix B of this part.

GCNP Category C aircraft means an aircraft that has been shown to comply with the GCNP Category C noise limit in appendix B of this part.

New Entrant Operator means any person that was not authorized to conduct commercial sightseeing operations within the SFRA as of December 31, 1996.

(b) *GCNP Category A Aircraft.* After [Effective date of final rule], no certificate holder may operate a greater number of GCNP Category A aircraft in commercial sightseeing operations within the SFRA than the number of aircraft listed on that certificate holder's operations specifications on December 31, 1996, for use in commercial sightseeing operations within the SFRA. After December 31, 2000, no certificate holder may operate a GCNP Category A aircraft in commercial sightseeing operations within the SFRA.

(c) *GCNP Category B Aircraft.* (1) After [Effective date of final rule], no certificate holder may operate a greater number of GCNP Category B aircraft in commercial sightseeing operations within the SFRA than the number of aircraft listed on that certificate holder's operations specifications on December 31, 1996, for use in commercial sightseeing operations within the SFRA, unless the aircraft was added to the certificate holder's operations specifications after December 31, 1996, and on or before December 31, 2000, as a replacement for a GCNP Category A aircraft that was listed on that certificate holder's operations specifications on December 31, 1996, for use in commercial sightseeing operations within the SFRA.

(2) After December 31, 2002, no certificate holder may operate more than 75 percent of the base level number of GCNP Category B aircraft in commercial sightseeing operations within the SFRA. Calculations resulting in fractions may be rounded to permit the continued operation of the next whole number of Category B aircraft.

(3) After December 31, 2004, no certificate holder may operate more than 50 percent of the base level number of GCNP Category B aircraft. Calculations resulting in fractions may be rounded to permit the continued operation of the next whole number of Category B aircraft.

(4) After December 31, 2006, no certificate holder may operate more than 25 percent of the base level number of GCNP Category B aircraft. Calculations resulting in fractions may be rounded to permit the continued operation of the next whole number of Category B aircraft.

(5) After December 31, 2008, no certificate holder may operate a GCNP Category B aircraft in commercial sightseeing operations within the SFRA.

(d) *GCNP Category C Aircraft.* Except for GCNP Category B aircraft added to the certificate holder's operations specifications as a replacement aircraft as authorized in paragraph (c)(1) of this section, no certificate holder may add an aircraft to its operations specifications for use in commercial sightseeing operations within the Special Flight Rules Area unless the aircraft is a GCNP Category C aircraft.

(e) *New entrant operators.* After [insert effective date of final rule], no new entrant operator may conduct commercial sightseeing operations within the SFRA unless the aircraft used in those operations is a GCNP Category C aircraft.

7. Appendix B is added to part 93 to read as follows:

Appendix B—GCNP Aircraft Noise Limits

This appendix contains procedures for determining GCNP aircraft noise limits for each aircraft subject to § 93.319 determined during the noise certification process as prescribed under part 36 of this chapter. Where no certificated noise level is available, an alternative measurement procedure may be approved by the Administrator.

1. GCNP Category B Noise Limit

A. For helicopters with a flyover noise level obtained in accordance with the measurement procedures prescribed in Appendix H of 14 CFR part 36, the limit is 84 dB for helicopters having 2 or fewer passenger seats, increasing at 3 decibels per doubling of the number of passenger seats for helicopters having 3 or more passenger seats. The limit at number of passenger seats of 3 or more can be calculated by the formula:

$EPNL_{(H-Cat.\ B)}$=84 +10log (# PAX seats/2) dB

B. For helicopters with a flyover noise level obtained in accordance wit the measurement procedures prescribed in Appendix J of 14 CFR part 36, the limit is 81 dB for helicopters having 2 or fewer passenger seats, increasing at 3 decibels per doubling of the number of passenger seats for helicopters having 3 or more passenger seats. The limit at number of passenger seats of 3 or more can be calculated by the formula;

$SEL_{(J-Cat.\ B)}$=81 +10log(# PAX seats/2) dB

C. For propeller-driven airplanes with a measured flyover noise level obtained in accordance with the measurement procedures prescribed in Appendix F of 14 CFR part 36 without the performance correction defined in Sec. F35.201(c), the limit is 73 dB for airplanes having 2 or fewer passenger seats, increasing at 3 decibels per doubling of the number of passenger seats for airplanes having 3 or more passenger seats. The limit at number of passenger seats of 3 or more can be calculated by the formula:

$L_{Amax\ (F-Cat.\ B)}$=73 +10log(# PAX seats/2) dB

D. In the event that a flyover noise level is not available in accordance with Appendix F of 14 CFR part 36, the noise limit for propeller-driven airplanes with a takeoff noise level obtained in accordance with the measurement procedures prescribed in Appendix G is 78 dB for airplanes having 2 or fewer passenger seats, increasing at 3 decibels per doubling of the number of passenger seats for airplanes having 3 or more passenger seats. The limit at number of passenger seats of 3 or more can be calculated by the formula:

$L_{Amax(G-Cat.\ B)}$=78+10log (# PAX seats/2) dB

2. GCNP Category C Noise Limit

A. For helicopters with a flyover noise level obtained in accordance with the measurement procedures prescribed in Appendix H of 14 CFR part 36, the limit is 80 dB for helicopters having 2 or fewer passenger seats, increasing at 3 decibels per doubling of the number of passenger seats for helicopters having 3 or more passenger seats. The limit at number of passenger seats of 3 or more can be calculated by the formula:

$EPNL_{(H-Cat.\ C)}$=80+10log (# PAX seats/2) dB

B. For helicopters with a flyover noise level obtained in accordance with the measurement procedures prescribed in Appendix J of 14 CFR part 36, the limit is 77 dB for helicopters having 2 or fewer passenger seats, increasing at 3 decibels per doubling of the number of passenger seats for helicopters having 3 or more passenger seats. The limit at number of passenger seats of 3 or more can be calculated by the formula:

$SEL_{(J-Cat.\ C)}$=77+10log (# PAX seats/2) dB

C. For propeller-driven airplanes with a measured flyover noise level obtained in accordance with the measurement procedures prescribed in Appendix F of 14 CFR part 36 without the performance correction defined in Sec. F35.201(c), the limit is 69 dB for airplanes having 2 or fewer passenger seats, increasing at 3 decibels per doubling of the number of passenger seats for airplanes having 3 or more passenger seats. The limit at number of passenger seats of 3 or more can be calculated by the formula:

$L_{Amax(F-Cat.\ C)}=69+10\log$ (# PAX seats/2) dB

D. In the event that a flyover noise level is not available in accordance with Appendix F of 14 CFR part 36, the noise limit for propeller-driven airplanes with a takeoff noise level obtained in accordance with the measurement procedures prescribed in Appendix G is 74 dB for airplanes having 2 or fewer passenger seats, increasing at 3 decibels per doubling of the number of passenger seats for airplanes having 3 or more passenger seats. The limit at number of passenger seats of 3 or more can be calculated by the formula:

$L_{Amax(G-Cat.\ C)}=74+10\log$ (# PAX seats/2) dB

Issued in Washington, DC, on December 24, 1996.

James D. Erickson,

Director, Office of Environment and Energy.

[FR Doc. 96–33145 Filed 12–30–96; 8:45 am]

BILLING CODE 4910–13–M

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

Proposed Air Tour Routes for the Grand Canyon National Park

AGENCY: Federal Aviation Administration, DOT.

ACTION: Notice of availability of proposed commercial air tour routes for the Grand Canyon National Park and request for comments.

SUMMARY: This notice announces the availability of and requests comments on proposed commercial air tour routes for the Grand Canyon National park (GCNP). The proposed commercial air tour routes are not being published in today's **Federal Register** because they are on very large and very detailed charts that would not publish well in the **Federal Register**. The proposed new routes, or modifications of existing commercial air tour routes, are related to airspace changes contained in a final rule affecting the special flight rules in the vicinity of GCNP and issued concurrently with this notice. The proposed commercial air tour routes are also related to a Notice of Proposed Rulemaking (NPRM) proposing the phase out of noisier aircraft operating in the vicinity of GCNP, also issued concurrently with this notice.

DATES: Comments must be received on or before January 30, 1997.

ADDRESSES: Comments on the proposed air tour routes may be delivered or mailed, in triplicate, to: Federal Aviation Administration, Attention: Dave Metzbower, Air Carrier Operations Branch, Flight Standards Service, AFS–220, 800 Independence Avenue, SW., Washington, DC 20591. Comments may be examined at the above address between 9 a.m. and 4 p.m. weekdays, except Federal holidays.

FOR FURTHER INFORMATION CONTACT: Daniel V. Meier, Jr., Air Carrier Operations Branch, AFS–220, 800 Independence Avenue, SW., Washington, DC 20591, Telephone (202) 267–3749 or Dave Metzbower, Air Carrier Operations Branch, AFS–220, 800 Independence Avenue, SW., Washington, DC 20591, Telephone (202) 267–3724.

SUPPLEMENTARY INFORMATION: The proposed commercial air tour routes are not being published in today's **Federal Register** because they are on very large and very detailed charts that would not publish well in the **Federal Register**. A copy of the proposed air tour routes may be obtained by contacting Denise Cashmere at (202) 267–3717, by faxing a request to (202) 267–5229, or by sending a request in writing to the Federal Aviation Administration, Air Transportation Division, AFS–200, 800 Independence Avenue, SW., Washington, DC 20591. Interested persons are invited to comment on the routes as they may desire. Commenters must identify that they are commenting on the proposed air tour routes for Grand Canyon National Park. All comments received on or before the closing date for comments will be considered by the Federal Aviation Administration before finalizing the air tour routes. Late-filed comments will be considered to the extent practicable.

Discussion

The FAA, in consultation with the NPS, has developed proposed air tour routes as a result of the final rule affecting the special flight rules in the vicinity of GCNP issued concurrently with this notice. The proposed air tour routes, which complement the final rule affecting the Special Flight Rules in the Vicinity of GCNP and the NPRM concerning noise limitations for aircraft operations in the vicinity of GCNP, will establish new routes or modify existing commercial air tour routes to accommodate airspace changes included in the final rule concerning GCNP. The final rule, which is to be effective May 1, 1997, and the NPRM are being issued concurrently with this notice. The final rule, in part, modifies the dimensions of the GCNP Special Flight Rules Area (SFRA); establishes new and modifies existing flight-free zones; establishes new and modifies existing flight corridors; and establishes reporting requirements for commercial sightseeing companies operating in the SFRA. The NPRM proposes to phase out noisier aircraft operating in the vicinity of GCNP.

The proposed routes were developed on the basis of airspace configurations, safety considerations, the goal of substantial restoration of natural quiet in the GCNP, economic considerations, and comments received in response to Notice No. 96–11, "Special Flight Rules in the Vicinity of Grand Canyon National Park" (61 FR 40120). Several commenters to Notice No. 96–11 noted that it was difficult to comment on the effects of the proposed changes since the proposed routes were not included in the notice. One commenter stated that the FAA and NPS have done only half of the task mandated under the Overflights Act (Pub. L. 100–91) since they have not yet proposed the air tour routes that will be flown.

Routes were not proposed concurrently with Notice No. 96–11 because it was necessary for the FAA to develop the final rule in advance of the route structure. The FAA encourages persons who committed on Notice 96–11 to comment on the commercial air tour routes proposed today.

This notice provide interested persons an opportunity to comment on the proposed air tour routes. Before the proposed air tour routes for GCNP are finalized, the FAA and the National Park Service (NPS) will fulfill their responsibilities to consult with Native American tribes on a government-to-government basis. In this consultation process, FAA, in coordination with NBS, will consider feasible actions to mitigate any identified significant impacts to Native American cultural, religious, or historic sites.

History

Public Law 100–91 required the Department of the Interior (DOI) to submit to the FAA recommendations to protect resources in the Grand Canyon from adverse impacts associated with aircraft overflights. In December 1987, the DOI transmitted its "Grand Canyon Aircraft Management Recommendation" to the FAA. Public Law 100–91 required the FAA to prepare and issue a final plan for the management of air traffic above the Grand Canyon, implementing the recommendations of the DOI without change unless the FAA determined that executing the recommendations would adversely affect aviation safety. After the FAA determined that some of the DOI recommendations would adversely affect aviation safety, the recommendations were modified to address those concerns.

On May 27, 1988, the FAA issued Special Federal Aviation Regulation (SFAR) No. 50–2 revising the procedures for operation of aircraft in the airspace above the Grand Canyon (53 FR 20264, June 2, 1988). Public Law 100–91 also required the DOI to submit a report to Congress "* * * discussing * * * whether [SFAR No. 50–2] has succeeded in substantially restoring the natural quiet in the park; and * * * such other matters, including possible revisions in the plan, as may be of interest." On September 12, 1994, the DOI submitted its final report and recommendations to Congress. This report, entitled "Report on Effects of Aircraft Overflights on the National Park System" (Report to Congress), was published in July 1995. The Report to Congress recommended numerous revisions to SFAR No. 50–2 in order to improve the natural quiet in the national parks. One recommendation was to modify SFAR–50–2 to effect and maintain the

substantial restoration of natural quiet at Grand Canyon National Park.

On June 15, 1995, the FAA published a final rule that extended the effective date of SFAR No. 50–2 to June 15, 1997 (60 FR 31608). This action allowed the FAA sufficient time to review thoroughly the NPS recommendations as to their impact on the safety of air traffic over GCNP.

In April 1996, President Clinton issued a memorandum for the heads of Executive Departments and Agencies (61 FR 18229). In his memorandum, the President directed the Secretary of Transportation to issue proposed regulations within 90 days to place appropriate limits on sightseeing aircraft over the GCNP to reduce the noise immediately and make further substantial progress towards restoration of natural quiet while maintaining aviation safety in accordance with Public Law 100–91. In addition, the President directed that action on the rulemaking to accomplish those purposes should be completed by the end of 1996.

On July 31, 1996, the FAA published a Notice of Proposed Rulemaking (NPRM) to reduce the impact of aircraft noise on GCNP and to assist the National Park Service (NPS) in achieving its statutory mandate imposed by Public Law 100–91 to provide for the substantial restoration of natural quiet and visitor experience in GCNP (Notice No. 96–11; 61 FR 40120).

The FAA held public meetings on September 16–20, 1996, in Scottsdale, AZ and Las Vagas, NV, to obtain additional comment on the NPRM and on the associated draft environmental assessment (EA). Comments and the transcripts of these meetings have been placed in the rulemaking docket (docket no. 28537) and the EA docket (docket no. 28653).

Issued in Washington, DC on December 24, 1996.

William J. White,

Acting Director, Flight Standards Service.

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