

**DEPARTMENT OF TRANSPORTATION****Federal Aviation Administration****14 CFR Parts 91 and 135**

[Docket No. 25149; SFAR No. 50]

**Special Flight Rules in the Vicinity of the Grand Canyon National Park****AGENCY:** Federal Aviation Administration (FAA), DOT.**ACTION:** Final rule; request for comments.

**SUMMARY:** This Special Federal Aviation Regulation (SFAR) establishes temporary procedures for the operation of all aircraft in the airspace above the Grand Canyon up to an altitude of 9,000 feet above mean sea level (MSL). In recent years, the high volume of air traffic over the park has increased the risk of midair collision. The overflights also generated noise impacts on park surface areas to a degree which may be inconsistent with Federal policies for operation of the Park. The restrictions adopted will: (1) Establish a Special Flight Rules Area from the surface to 9,000 feet MSL in the area of the Grand Canyon; (2) prohibit flights in this area unless specifically authorized by the local FAA Flight Standards District Office; and (3) establish certain terrain avoidance and communications requirements for flights in the area. The temporary rules adopted will reduce the risk of midair collision, will reduce the risk of terrain contact accidents below the rim level, and will reduce the impact of aircraft noise on the Park environment.

**DATES:** *Effective date:* April 27, 1987.*Comment date:* Comments must be received on or before April 15, 1987.*Expiration date:* Special Federal Aviation Regulation No. 50 expires on June 15, 1987.

**ADDRESSES:** Comments on the proposed Permanent rule regulation may be mailed in duplicate to: Federal Aviation Administration, Office of the Chief Counsel, Attention: Rules Docket (AGC-204), Docket No. 25149, 800 Independence Avenue, SW., Washington, DC 20591; or delivered in duplicate to: FAA Rules Docket, Room 916, 800 Independence Avenue, SW., Washington, DC.

Comments may be examined in the Rules Docket weekdays, except Federal holidays, between 8:30 a.m. and 5:00 p.m.

**FOR FURTHER INFORMATION CONTACT:** David L. Bennett, Office of the Chief Counsel, AGC-230, Federal Aviation Administration, 800 Independence

Avenue, SW., Washington, DC 20591, Telephone: (202) 267-3491.

**SUPPLEMENTARY INFORMATION:****Comments Invited**

Even though this temporary rule is final, interested persons are invited to comment on this amendment and on the proposed permanent rule which would supersede this rule by submitting such written data, views, or arguments as they may desire on any portion of the amendment or proposed rule. 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 duplicate to the address listed above. Commenters wishing the FAA to acknowledge receipt of their comments must submit with those comments a self-addressed, stamped postcard on which the following statement is made: "Comments to Docket No. 25149." The postcard will be date/time stamped and returned to the commenter. All comments submitted will be available for examination in the Rules Docket both before and after the closing date for comments.

**Availability of Document**

Any person may obtain a copy of this document or Notice No. 86-21 by submitting a request to the Federal Aviation Administration, Office of Public Affairs, Attention: Public Information Center, APA-430, 800 Independence Avenue, SW., Washington, DC 20591; or by calling (202) 267-8521. Communications must identify the special rule number of the document.

**Background**

On December 4, 1986, the FAA issued Notice No. 86-21 (51 FR 44422; December 9, 1986) proposing to establish temporary flight restrictions in the vicinity of the Grand Canyon National Park (GCNP) up to an altitude of 9,000 feet above mean sea level (MSL). The notice also proposed a follow-on final rule to take effect upon expiration of the Special Federal Aviation Regulation (SFAR) in June 1987. As proposed in Notice 86-21, the SFAR would: (1) Establish a Special Flight Rules Area from the surface to 9,000 feet MSL in the area of the Grand Canyon; (2) Prohibit flights in this area unless specifically authorized by the local FAA Flight Standards District Office; and (3) establish certain terrain avoidance and communications requirements for flights in the area. The proposed final rule would include, in addition to the general

restrictions contained in the SFAR, (1) provisions to permit access to the special flight rules area by general aviation operators, and (2) if supported by evidence, provisions for avoidance of certain noise-critical sites in the park by low-flying aircraft.

The original comment period for the temporary SFAR closed on January 10, 1987, and this action is based only on those comments received by that date. The original comment period on the proposed permanent rule closed on March 1, 1987. However, Docket No. 25149 has been reopened for public comment until April 15, 1987, to permit further comment based on the actual provisions of this temporary rule.

*The Need for Regulatory Action*

In proposing the flight restrictions, the FAA cited both operational reasons of safety and efficiency and environmental reasons arising from concern for the impact of aircraft noise on the Park surface.

*Safety and efficiency.* The Grand Canyon constitutes an attraction to sightseers from the air as well as the ground, which results in an unusual level of air traffic in the airspace above the canyon. Because of the terrain of the canyon and the relatively low level of most sightseeing flights over the Grand Canyon, traffic over the canyon is not controlled by FAA air traffic control. The result is a situation in which a substantial number of aircraft operate in the same general airspace over the canyon under the flight rules that apply to sparsely populated areas and low traffic volume airspace. Separation of aircraft in this airspace is accomplished only by the see-and-avoid responsibility of each pilot and, above 3,000 feet AGL, the 1,000-foot separation of eastbound and westbound traffic under 14 CFR 91.109.

While the safety record in the vicinity of the canyon compares favorably with the general accident rates for general aviation and air taxi operators, there have been accidents in the canyon itself, most recently a collision between an air tour airplane and a tour helicopter in June 1986. The FAA attributes the relatively good safety record in the canyon area in large part to the voluntary use by the commercial tour operators, whose flights represent approximately 87 percent of the lower-altitude traffic in the area, of standard route, altitude, and communications procedures. Because each tour operator flies a standard route over the canyon and periodically announces its location and altitude on a common radio frequency at designated reporting

points, the pilot of each such aircraft is aware of the location of all other tour aircraft in the area.

Notwithstanding this past record, however, the FAA believes that there are two general reasons why some degree of additional regulation of canyon overflights is necessary. First, the existing procedures used by the air tour operators are voluntary and not regulatory. While some degree of control over Part 135 commercial operators can be exercised through the operations specifications of each operator, commercial air tours may be conducted under Part 91 by virtue of an exception to the applicability of Part 135. Section 135.1(b)(2) provides that a person conducting nonstop sightseeing flights within 25 miles of the airport at which the aircraft takes off and lands is not covered by Part 135.

Second, the voluntary procedures do not apply to general aviation and military flights. The voluntary procedures, therefore, have substantially contributed to the safe operation of commercial tour operators but have little safety benefit with respect to general aviation, military, and nonparticipating air tour operators. The FAA believes that there is a need to require that commercial operators use the standard procedures and to separate transient general aviation traffic from the regular tour operations for a brief period until permanent procedures for all operators can be developed.

*Noise impact on the surface.* The FAA believes that there is also a public interest in promoting a quiet environment in the canyon and minimizing the intrusion of aircraft noise on this environment, consistent with operational air safety and efficiency considerations. Congress, in the Grand Canyon National Park Enlargement Act of 1975, expressly provided for protection of the natural quiet of the park. Under § 8 of the Act (16 U.S.C. 228g), if the Secretary of the Interior finds that aircraft or helicopter activity within the park is likely to cause a significant adverse effect on the "natural quiet and experience of the Park," he is required to submit recommendations to the Administrator of the FAA for measures to mitigate that impact.

The NPS held a series of public hearings in 1985 and 1986 and solicited comments from the public, including environmental groups and air tour operators, on the subject of aircraft operations at the canyon. Following the above process, the Department of the Interior, in a letter from the Assistant Secretary for Fish and Wildlife and Parks, submitted recommendations to the FAA Administrator on November 17,

1986. The Department did not find a significant impact of aircraft noise on the Park, but rather found that the data available was insufficient for management decisions or recommendations at this time. The Department, therefore, recommended specific actions relating to the safety of aircraft operations, but with respect to aircraft noise recommended further study. The recommendations may be summarized as follows:

- (1) Adopt airspace/flight regulations which:
  - Provide for the separation of aircraft, including helicopters;
  - Prohibit flights in the inner gorge of the canyon;
  - Provide for some regulation of flights between the inner gorge and the upper rim of the canyon; and
  - Establish flight paths over the canyon which avoid major visitor overlooks and peregrine nesting areas.
- (2) Install radar at the Grand Canyon National Park Airport to assist in aircraft separation;
- (3) Undertake a joint 2-year study, with the NPS, of the impacts of aircraft noise on the Park with the object of additional regulation to reduce those impacts.

Finally, the Department offered to consult and cooperate with the FAA in the implementation of these actions.

The FAA will fully and carefully consider the recommendations and continuing advice of the Department of the Interior in the development of aviation safety and environmental measures at GCNP. The Interior recommendations were not specifically reflected in the proposed interim SFAR, in view of the complexity of the recommendations. The SFAR does address the recommendations to an extent, such as the stringent restrictions on aircraft operations below the level of the south rim of the canyon. Those recommendations, and any subsequent information and comments offered by the Department of the Interior, will be fully considered in the promulgation of the permanent final rule proposed in Notice No. 86-21.

The FAA agrees that unnecessary flights by aircraft at low levels within the canyon can be extremely intrusive on the park environment and annoying to park visitors. The information available to the FAA at this time does not permit the agency to incorporate specific actions in the temporary special rule. However, the FAA specifically requests comments on recommended environmental measures in the development of the proposed permanent rule. Also, in the interim, authorizations

by the Las Vegas Flight Standards District Office to operate in the Special Flight Rules Area will contain conditions which route aircraft away from certain areas, such as the south rim visitor overlooks and Thunder Falls. Such measures may be formally incorporated in the permanent rule, if adopted.

#### *Comments on the Proposed SFAR*

More than one hundred comments were received on the proposed SFAR by the closing date of January 10. A large number of these comments were in response not to the proposal itself but to editorials in San Francisco and Phoenix newspapers which described the proposal, with some inaccuracies. These comments were generally critical of commercial overflights of the Grand Canyon.

Many of the comments, while submitted by January 10, did not distinguish between the temporary rule and the permanent follow-on rule. To the extent the comments were directed toward long-term philosophy for regulation of operations over the canyon, they will be fully considered and addressed in any further rulemaking. The comments will be addressed in this preamble to the extent they related to the temporary rule proposed, and adopted, which will expire on June 15, 1987.

*Aircraft noise.* A number of commenters, including the Maricopa Audobon Society, the Sierra Club, and the Wilderness Society, stated that aircraft flights should not be permitted over the Grand Canyon or should be limited to altitudes above the rim of the canyon, or higher, to minimize aircraft noise in the Park. The Maricopa Audobon Society and the Sierra Club supported the "quiet canyon" option of prohibiting all aircraft flight above the Park to an altitude of 18,000 feet MSL. Many of these commenters suggested that FAA was simply preserving the existing aircraft overflight situation, which they considered unacceptable. The National Parks and Conservation Association supported the need for regulations but urged that a minimum altitude be established at 2,000 feet above the uppermost rim level, in accordance with FAA Advisory Circular 91-36C.

The National Park Service supported the issuance of regulations, but suggested that the regulations incorporate noise mitigation measures such as routing aircraft away from noise-sensitive areas. NPS also requested that the FAA use the definition of "rim level" developed by

the NPS in its 1986 environmental assessment of the proposed GCNP Aircraft Management Plan—generally the uppermost rim of the canyon.

The temporary rule adopted by the FAA provides that an aircraft may not be operated within the Special Flight Rules Area, below 9,000 feet MSL, unless authorized by the FAA Las Vegas Flight Standards District Office. The FSDO will not authorize transient flights in the area under the SFAR. Therefore, general aviation and military flights, which may now operate virtually down to the surface of the canyon floor under FAR section 91.79, will be required to operate above 9,000 feet MSL until June 15.

The Las Vegas (LAS) Flight Standards District Office (FSDO) will authorize qualifying commercial air tour operators to operate in the area, under specific conditions contained in their operations specifications. The minimum altitudes at which the tour operations will be authorized will be as follows. In the western sector (western boundary of the area to Diamond Creek), the minimum authorized altitudes will be 2,500 feet MSL for helicopters and 3,000 feet MSL for fixed wing aircraft. While these altitudes are below the south rim elevation in this area, the interest in minimizing aircraft noise in this sector is reduced by the fact that the river in this area already experiences heavy motorboating and recreational use. Also, NPS has not identified any noise sensitive areas in this sector. Finally, the minimum altitudes are substantially higher than some tour operators have flown in the past.

In the central sector (Diamond Creek to Supai Village), the minimum altitudes authorized will be 5,500 feet MSL for helicopters and 6,000 feet MSL for fixed wing generally, and 6,500 feet MSL helicopter and 7,500 feet MSL fixed-wing above Supai Village. The north rim elevation in this sector averages about 6,000 feet, while the south rim varies from about 5,500 feet to 6,600 feet. In general, the tour routes will climb to higher altitudes heading eastbound as the terrain rises.

In the eastern sector (Supai Village to the eastern boundary), the minimum authorized altitudes will be 6,500 feet MSL for helicopters and 7,500 feet MSL for fixed wing. The elevation of the north rim in this area varies from approximately 5,800 feet to 8,500 feet; the south rim elevation varies from approximately 5,500 feet to 7,500 feet. For comparison, the elevation of the Colorado River in this area averages about 2,400 feet.

In the noise-sensitive central and eastern sectors the minimum altitude

imposed by the FAA in the tour operators' operations specifications will be higher than altitudes used by some of the operators in the past. These altitudes are not above the highest point of both rims at every point, but the altitudes do approximate the level of the lower rim of the canyon through that area and virtually preclude sustained operation "in" the canyon. As a result, the minimum altitudes required by the rule for tour operators, general aviation aircraft, and military aircraft are substantially higher than required by existing FAA regulations, 14 CFR 91.79, and higher than the previous flight altitudes used by some operators.

The FAA believes that the minimum altitudes imposed by the rule are a beneficial change in current procedures and will have a positive effect on aircraft noise impact at the Park. Setting those altitudes a few hundred feet higher in the central and eastern sectors to coincide with the precise rim level, even if it could be determined, would produce very little additional reduction of noise on the Park surface and would cause substantial operational problems for pilots, by compressing traffic into a smaller vertical airspace. The imposition of rim-level altitudes in the western sector of the Special Flight Rules Area was not considered warranted, in view of the lesser impact of aircraft noise on the surface in that sector and the absence of operational problems at the altitudes described above.

The FAA will not require minimum authorized altitudes higher than the rim level, as requested by some commenters, for two primary reasons. First, safety requires that there be a sufficient number of operating altitudes below controlled airspace to provide for the separation, at 500-foot intervals, of eastbound and westbound traffic and the separation of fixed wing and helicopter traffic. Pilots operating aircraft above 10,000 feet MSL under Part 135 and 12,500 feet MSL under Part 91 are subject to certain oxygen requirements. Also, IFR (ATC controlled) traffic may operate in the area from 9,000 feet MSL. The altitudes specified in FAA authorizations, therefore, begin at the minimum altitudes listed above in order to provide an adequate number of practical operating altitudes.

Second, on the information available, the FAA is not in a position to adopt a regulation which has tangible operational and economic impacts for the purpose of mitigating noise impacts, without further review. The FAA acknowledges the strong sentiments of many commenters that the Grand Canyon National Park should be

relatively free from aircraft noise. In response, the FAA has adopted a temporary rule which restricts nonessential aircraft flights to altitudes which are generally several thousand feet above the surface of the canyon. Further noise mitigation measures will be considered in the review of public comment on the proposed permanent rule. However, the FAA does not at this time have sufficient technical information or recommendations from other concerned agencies which would support a regulation limiting aircraft overflights to altitudes above this level.

A number of commenters suggested that the avoidance of certain noise-sensitive sites in the canyon was preferable to, or necessary in addition to, the restriction of aircraft to high altitudes. Many of the tour operators commenting on the proposal either now operate, or have proposed to operate, on routes which avoid certain areas of the canyon identified as particularly noise-sensitive. On an interim basis the Las Vegas FSDO, in approving commercial tour routes, will ensure that these routes do avoid the Grand Canyon Village area, Deer Creek and Thunder Falls, the north rim lookout at Cape Royal, Desert View, Point Sublime, and Toroweap to the maximum extent practical. These areas and others which could benefit from protection from overflight will be considered for inclusion in the permanent final rule.

The National Park Service and several other commenters noted that air carrier aircraft do operate over the Park at relatively low altitudes (e.g. 10,000 to 12,000 feet MSL) on occasion, in contrast to representations in Notice 86-21. FAA has determined that such overflights do, in fact, occur, and the agency is taking measures to ensure that departure and arrival clearances at McCarran International Airport do not permit low-altitude deviations over the Grand Canyon.

A number of commenters suggested that the FAA limit the number of aircraft flights over the Park. The density of air traffic above the Grand Canyon, even on peak traffic days in the summer, does not present an operational situation which would require the metering of flights over the canyon. Even without regard to the questions of the agency's authority and the problems of allocating limited operating rights, the FAA does not believe that the current environmental situation at the Grand Canyon supports consideration of such a complex and intrusive regulatory action as limitation on the number of flights. The FAA notes that the Department of

the Interior has not requested such a limitation.

Several commenters, among them tour operators and general aviation pilots, expressed doubt that the majority of the public visiting the canyon actually objected to the level of noise caused by overflying aircraft, or that aircraft noise could be heard above the ambient surface sounds of the canyon such as the river.

#### *General aviation operations.*

Comments on the proposed SFAR were received from the Aircraft Owners and Pilots Association (AOPA), the Arizona Pilots Association, the Experimental Aircraft Association (EAA) and several individual pilots. These commenters criticized the exclusion of general aviation operations from airspace in which commercial operations would be permitted, on grounds of fairness and on the basis that general aviation aircraft were not involved in the June 1986 accident and are not the primary source of aircraft noise in the Park. Several of the commercial tour operators commenting on the proposal supported the right of general aviation operators for access to the same general airspace as the tour operators.

As stated in Notice No. 86-21, the FAA is not proposing to restrict general aviation operations from the Special Flight Rules Area on a permanent basis. The restriction in the temporary rule is adopted only to provide separation of uncontrolled general aviation traffic from the regulated commercial operations until procedures can be developed for transient general aviation flight in the same airspace with the new air tour routes. The SFAR limits general aviation operations to the higher altitude not because of any inherent problem in general aviation operations, but because a regulatory mechanism existed with respect to the commercial operators (standard flight routes/procedures; operations specifications) but not for Part 91 operations. The 9,000 foot limitation continues to permit overflight of the canyon at an altitude which, in the eastern sector of the area, is within 1,500 feet of the minimum altitude authorized for fixed-wing commercial operators and 500 feet of terrain on the north rim.

Several of the commenters cited specific technical problems with a 9,000-foot minimum altitude for general aviation aircraft, including the limited performance capability of many single engine aircraft above that altitude, and the high density altitude common in that region during the summer months. The FAA agrees that operation can be marginal for some single engine aircraft at altitudes above 9,000 feet MSL in hot

weather. However, the SFAR adopted expires on June 15, and the FAA does not expect the temperature and density altitude to be a problem before that date. The follow-on rule, if adopted, will contain procedures for transient aircraft operation below 9,000 feet MSL.

The Arizona Pilots Association also objected to the characterization of general aviation pilots as exclusively transient operations by pilots inexperienced with flying above the canyon. The FAA believes that this characterization does apply to many of the general aviation pilots operating above the canyon. To the extent pilots based in the region transit the airspace above the canyon on local flights, the FAA continues to believe that operation at or above 9,000 feet MSL will not be a significant hardship or inconvenience on a temporary basis only through June 15. However, if a local pilot has a continuing operational need for transit through the Grand Canyon Special Flight Rules Area prior to that date, he or she may contact the Las Vegas Flight Standards District Office for consideration of an authorization.

Various alternatives to the 9,000 foot limitation were suggested by the Arizona Pilots Association, EAA, AOPA, and several other commenters, including development of standard procedures and indication of these procedures on flight charts. These comments will be considered in the evaluation of a permanent rule, but are not a practical approach within the time frame of the SFAR adopted. The FAA will also consider certain recommendations for nonregulatory action with respect to flights above the Grand Canyon, such as the installation of radar to monitor air traffic in the area below 9,000 feet MSL.

*Impacts on commercial air tour operations.* The Grand Canyon Flight Operators Association (GCFOA) and several individual tour operators generally supported the regulation, but requested changes to specific provisions of the temporary rule as proposed. GCFOA, the Helicopter Association International (HAI), and individual helicopter operators objected to the prohibition on operation closer than 500 feet to terrain (discussed below). GCFOA also expressed concern about delays in approval of the operators' Part 135 operations specifications if the rule was implemented on an expedited basis.

The FAA agrees that current air tour operators who submit their proposed tour routes and procedures to the FAA on a timely basis should not be prohibited from operating by a delay in the Las Vegas FSDO's processing of the submissions. Accordingly, the FAA has

set an effective date for the rule 30 days after publication to permit review and approval of all submissions, and to make adjustments as necessary, before the requirement takes effect. Therefore, the FAA anticipates no interruption in the operations of operators who submit adequate and timely operating proposals.

GCFOA also commented that any altitude restrictions in the rule should be expressed as MSL (above mean sea level) altitudes rather than using a reference to the canyon "rim" or "rim level." As stated in the notice, the FAA believes that the canyon rim is not an adequate altitude reference as regulatory guidance for pilots operating above the canyon. The rim elevation varies along the length of the canyon, and the north and south rims are at different elevations for much of the canyon. Accordingly, the temporary rule adopted, as with the proposal, uses specific MSL altitudes rather than the term "rim level" to specify minimum altitudes. The authorizations issued by the Las Vegas FSDO will also use MSL altitudes and not references to the rim.

GCFOA also requested that the FAA establish a continuing working group composed of the FAA, the National Park Service, tour operators, general aviation, environmental groups, and perhaps congressional staff members. While this suggestion is not directly related to the proposed rules, the FAA will consider the Association's recommendation.

*Commercial helicopter operations.* Individual commercial helicopter tour operators at the Grand Canyon, as well as the GCFOA and HAI, objected to the requirement to remain at least 500 feet from terrain in the canyon. HAI and the individual helicopter operators also requested that helicopters be authorized to operate below the rim of canyon. The primary objection to the 500-foot restriction was that it would make helicopter tours of the Anasazi ruins near Point Sublime commercially infeasible, because the ruins could not be viewed adequately from 500 feet away. One operator stated that it currently hovers approximately 100 feet away from the ruins on its current tours. Operators also claimed that the restriction made helicopter tours less competitive with fixed-wing tours.

The FAA proposed the 500-foot limitation for both environmental and operational reasons. The rule does not affect fixed-wing Part 135 operations, which are already required by FAR section 135.203 to remain 500 feet from terrain. The rule does serve a safety purpose with respect to Part 91 operations, which are not restricted as

to distance from terrain in sparsely populated areas (as long as they remain 500 feet from persons, vehicles, boats, and structures). In addition, the limit provides an environmental buffer against aircraft flight which is unnecessarily close to the terrain and the wildlife of the GCNP. While neither environmental groups nor the NPS provided information to support any specific impact of aircraft overflight on wildlife or other park values (such as the Point Sublime archeological site), the FAA believes that the unique characteristics of the Park, and the congressional statement of policy in the Grand Canyon National Park Enlargement Act of 1975, warrant a greater degree of protection for the surface of the Park than is provided by the general minimum safe altitude restrictions in FAR section 91.79.

One helicopter operator enclosed a copy of a study by Professor D.S. Brumbaugh on the effects of helicopter flights on the Point Sublime Anasazi site. The study did not consider long term fatigue effects on the structure, but concluded that excessive ground velocity/acceleration and resonant shaking of the walls by a single helicopter would not result in damage. However, the study was based on a minimum distance of 300 feet. The operator who submitted the study represented that "current lateral separation from the ruins is maintained at approximately 100 feet." Because the study did not address long term effects, and because the study conditions were more favorable than those of actual tour flights, the FAA does not agree that information available at this time warrants a conclusion that no protection for the site is appropriate.

*Other comments.* In a joint letter, U.S. Representatives Morris K. Udall and (now Senator) John McCain stated that the proposed regulation forms a basis for a plan to manage aircraft operations around the Grand Canyon. However, they commented that flights should be kept above the canyon rim and expressed concern that the rule would not accomplish this. Also, they urged that the FAA work with NPS to develop a plan which restores the natural quiet of the Park as well as ensures aircraft safety. The FAA believes that the regulation adopted, as implemented using the minimum authorized altitudes described above, is generally consistent with the legislation introduced in the House of Representatives, although the minimum altitudes imposed are somewhat lower than those requested by Congressman Udall and Senator McCain. The views of the Congressmen

were primarily directed toward the proposed permanent rule and, therefore, will be fully addressed in any further rulemaking to implement a permanent rule.

The National Transportation Safety Board (NTSB) strongly supported the prohibition on commercial operations conducted under Part 91 in the Special Flight Rules Area. The NTSB also supported the requirement that commercial operators comply with approved routes and altitudes and make position reports on common frequencies. The Board expressed concern, however, over the FAA resources available at the Las Vegas FSDO to evaluate and approve the routes requested by tour operators. As mentioned above, the FAA is allowing 30 days from publication before the rule becomes effective to provide time for the LAS FSDO to evaluate and approve the proposed routes.

The Truxton Canyon Agency noted FAA's statement in the preamble to the proposal that commercial operations to Indian reservations in the Special Flight Rules Area would be authorized, but the Agency requested that this be included in the language of the rule itself. The FAA will not deny any landowners in the Special Flight Rules Area aerial access to their land, including the Indian reservations in the area. Accordingly, the FAA does not believe that it is necessary to include in the rule a statement to the effect that access will continue to the reservations.

#### The Special Rule

For the reasons discussed above, the FAA is adopting a Special Federal Aviation Regulation, to take effect on April 27, 1987 and expire on June 15, 1987, which will do the following:

1. Establish a Grand Canyon National Park Special Flight Rules Area from the surface to 9,000 feet MSL. The area would be marked on aeronautical charts and described in other pilot information publications.

2. Prohibit operation by any aircraft in the defined area unless (a) the operator holds a Part 135 certificate and has express authorization in its Part 135 operations specifications to operate in the airspace, (b) the operator is authorized in writing by the FAA Las Vegas Flight Standards District Office to operate in the airspace, or (c) the aircraft is on an official search and rescue mission. In either of the first two cases (which will include virtually all flights within the area) the authorization will contain specific limitations on the operation, including minimum altitudes. Minimum allowable flight altitudes will be approximately the rim level of the

canyon unless there is an operational need for flight below that level (such as landing at one of the reservations). The terms "rim" or "rim level" are not used to describe altitude restrictions in the authorizations because the north and south rims are at different levels and because the rim is too variable in elevation to constitute a practical flight reference for pilots.

3. Prohibit commercial tour operations below 9,000 feet MSL by Part 91 operators unless they obtain a Part 135 certificate and operations specifications which authorize operation in the Grand Canyon National Park Special Flight Rules Area.

4. Prohibit, except when necessary or when specifically authorized for certain purposes, flight closer than 500 feet to any terrain or structure in the canyon.

5. Require pilots to monitor certain common frequencies and make position reports as specified in their authorization to enter the airspace.

In effect, the rule generally prohibits flight below the approximate level of the south rim of the canyon, except in the western sector where safety and noise impacts permit a lower minimum altitude, and except for those flights necessary for operation of the park and for provision of emergency services. In addition, the rule restricts aircraft operations in the airspace between the rim and 9,000 feet MSL to aircraft with a park-related need to be in the area and to commercial tour aircraft which meet extensive equipment, experience, training, and operational requirements. The restrictions which apply to transient aircraft between the rim and 9,000 feet MSL are temporary and will remain in effect only until procedures for transient operations can be integrated with the standard procedures used by the regular commercial operators over the canyon. The rule imposes no new restrictions on flight above the canyon above 9,000 feet MSL.

#### Analysis by Section

Section 1 provides that the rule applies to all persons operating under VFR in certain airspace from the surface to 9,000 feet MSL and defines the boundaries of that airspace. Applying the rule to all persons has the effect of applying the rule to military as well as civil pilots. Aircraft operating under IFR would not be operating at the altitudes or in the area covered by the rule. (With the exception of a small portion of VOR airway in the northeast corner of the area, the base of controlled airspace within the designated area is at 9,000 feet MSL or higher.)

Airspace up to 9,000 feet MSL is restricted to include sufficient airspace to permit aircraft to operate at different altitudes for nonconflicting eastbound and westbound operations, e.g., 5,500 and 7,500 feet MSL eastbound and 6,500 and 8,500 feet MSL westbound. Capping the special area at 9,000 feet MSL permits overflight of the canyon by general aviation aircraft eastbound at 9,500 feet, which is within the capability of even small single-engine aircraft.

The lateral boundaries of the area extend beyond the limits of the park itself to include all of the areas which are commonly subject to canyon sightseeing overflights, including certain Indian reservation land, and to provide simplified boundaries for practical compliance by pilots. Where possible, the boundaries have been established coincident with VOR radials to enable pilots to use aircraft navigation equipment to locate their position in relation to a boundary line. A cutout from the area has been provided for the GCNP Airport control zone, in recognition of the need for aircraft to descend to and climb out from the airport. The two published instrument approaches to the GCNP Airport are from the southwest and will not be affected by procedures established by this rule.

Section 2 of the rule defines the term "Park" as the Grand Canyon National Park.

Section 3 of the rule sets forth the requirement for authorization for aircraft to operate in the Special Flight Rules Area. An exception to the general requirements is made for emergencies, to clarify that a bona fide emergency landing in the canyon would not violate this rule. Also, authority is reserved for the Administrator to authorize flights in the area in the infrequent case in which the normal authorization process would not apply. The agency does not anticipate the use of this provision during the duration of the special rule.

Section 3 prohibits flight in the Grand Canyon National Park Special Flight Rules Area unless authorization to operate in the designated area is obtained from the Las Vegas Flight Standards District Office or unless the aircraft is on an Air Force-directed search and rescue mission. Paragraph (a) provides that specific authorization may be incorporated in the operations specifications issued to a Part 135 operator. Operations specifications are detailed rules and conditions for commercial operations which are issued to each holder of a Part 135 certificate. To FAA's knowledge all of the operators currently conducting commercial air tours of the Grand Canyon hold Part 135

certificates. The Las Vegas Flight Standards District Office (FSDO), in cooperation with the active tour operators, has developed specific conditions and limitations on the Grand Canyon operation of each such operator. Those conditions and limitations will be included in the operations specifications of each tour operator and will be enforced by the FAA. The provisions will include detailed requirements for routes, altitudes, communications and other procedures, and for pilot experience and equipment.

Authorization through operations specifications will permit continuation of the air tour industry at the Grand Canyon without significant change from present procedures. The industry successfully serves a certain segment of the demand for tourist access to the Grand Canyon and has done so with an impressive safety record over the years. The restrictions promulgated in this rule will, however, make the procedures now voluntarily used by most operators mandatory and enforceable. Second, the prescription of certain minimum altitudes will require some operators to fly at higher altitudes on their tours, in some areas, than they have in the past. The minimum altitudes specified in the operations specifications will in most cases be an MSL altitude near to the approximate elevation of the south rim in each sector of the canyon.

Paragraph (a) will also permit continuation of commercial operations to Indian reservations within the Special Flight Rules Area. Such flights are routinely conducted for tourism at the reservations, for pick-up of river rafters, and for aerial supply and transportation services to the reservations. Operators conducting these flights must hold Part 135 certificates and operations specifications and will be subject to the same general restrictions as the tour operators consistent with the nature of their operations.

Paragraph (b) provides that operation in the area is not prohibited if authorized in writing by Las Vegas FSDO and conducted in accordance with the conditions of that authorization. The rule states that authorization will normally be provided only for operations of aircraft necessary for law enforcement, firefighting, emergency medical treatment or evacuation of persons in or near the park, or for support of park maintenance or activities. As mentioned earlier, the NPS has a continuing need for aircraft access to the canyon surface by NPS and contractor aircraft for a wide range of purposes related to operation of the park. FAA, through the Las Vegas FSDO, will authorize such operations by

written certificate of authorization upon confirmation from the Superintendent of the GCNP that he requests the authorization for that operation. The written authorization will contain conditions similar to those included in the air tour operators' operations specifications. This will ensure that operations in the Special Flight Rules Area are using common procedures and radio frequencies and that the incidence of low altitude aircraft flights is kept to the minimum necessary for operation of the park.

It is not the FAA's intent to deny air access to any surface point within the Special Flight Rules Area. Flights requested by the NPS or by representatives of the Indian reservation landing areas will be authorized subject to the standard conditions imposed on all operators within the area. Other requests for flight through the area below 9,000 feet MSL, including general aviation and military sightseeing flights, will normally be denied.

Paragraph (c) permits search and rescue (SAR) aircraft under the direction of the U.S. Air Force Rescue Coordination Center to enter the area without prior coordination with the Las Vegas FSDO. SAR missions over the canyon are very infrequent and are not expected to occur during the period of this special rule.

Section 4 requires all commercial sightseeing operations to be conducted under a Part 135 certificate, notwithstanding the exception to Part 135 applicability contained in § 135.1(b)(2). The requirement will prohibit tour operations by Part 91 operators, under § 135.1(b)(2), over the canyon below 9,000 feet MSL. To the agency's knowledge all operators currently providing commercial sightseeing flights over the Grand Canyon hold Part 135 certificates, although operations by Part 91 operators have been common in the past.

Section 5 prohibits operation within 500 feet of terrain in the canyon unless necessary for takeoff or landing, unless authorized by the Las Vegas FSDO for one of the park operation purposes listed in Section 3, or except in an emergency. This provision applies the Part 135 restrictions of § 135.203(a)(1) to all operators. The restriction provides certain minimum protections to unique park terrain, wildlife, and archaeological sites until the effect of low altitude aircraft flight can be determined.

Section 6 requires that pilots operating in the area monitor certain frequencies and make radio position reports at the points specified in their authorization. The FAA believes that the use of

common frequencies and periodic reporting of aircraft location, similar to the procedure for a Common Traffic Advisory Frequency at uncontrolled airports, significantly reduces the risk of midair collision. Therefore, this procedure is made mandatory for the duration of the special rule. Exceptions are incorporated for aircraft required to be in contact with the GCNP control tower or on a USAF-directed search and rescue mission.

Section 7 provides that this Special Federal Aviation Regulation will expire on June 15, 1987. The FAA intends to issue a permanent rule to become effective on or before that date, to incorporate the comments received and the results of experience under the SFAR. If development of the rule is delayed and cannot be completed by June 15, the SFAR may be extended to provide the necessary additional time.

#### The Proposed Permanent Regulation

This SFAR has an expiration date of June 15, 1987. The FAA proposes to issue a permanent final rule effective on or before that date. In Notice No. 86-21, the agency solicited comments on the need for permanent measures to regulate the flight of aircraft above the Grand Canyon, for safety and environmental reasons, and on what those measures should be.

The FAA proposes a final rule which would contain the following provisions:

1. The rule would take effect upon expiration of the SFAR on June 15, 1987.
2. The rule would incorporate the provisions of the SFAR, subject to the additions and revisions listed below.
3. The rule would provide means by which general aviation operators could operate within the Special Flight Rules Area, subject to certain limitations and preconditions.

Such provisions could include, for example:

- A requirement for a briefing from a Flight Standards district office or Flight Service Station in the region before entering the area. The briefing could include required procedures (such as reporting points), environmentally sensitive areas which should be avoided, and information on the activities of other operators in the area.
- Preferred or required routes and altitudes for general aviation transit over the canyon.
- 4. The rule would identify any parts of the canyon which the FAA finds, on the basis of comments received and the recommendations of the Department of the Interior, are unusually sensitive to low-altitude aircraft overflight. These

areas could be the subject of voluntary or mandatory limits on overflight below certain minimum altitudes.

The agency specifically requested comments on the following issues:

1. The need for or adequacy of the specific measures proposed.
2. Minimum altitudes for air tour operations and general aviation sightseeing flights above the canyon, including whether different altitudes should be specified in different areas of the canyon.
3. The appropriate lateral boundaries of the proposed permanent Special Flight Rules Area.
4. Procedures for permitting general aviation flights above the canyon at altitudes comparable to those at which the commercial tour operators fly. Such procedures could include specific routes, altitudes, prerequisite briefings or training, etc.
5. Identification of wildlife, archaeological sites, and other natural and historical values in the Park which might be impacted by aircraft overflight.
6. Identification of the areas of the canyon which are most sensitive and least sensitive to aircraft overflight.

In reopening the comment period in Docket No. 25149 through April 15, the FAA solicits further comment on the above issues in light of the actual provisions adopted in this temporary special rule.

#### Economic Impact

The economic impact of the special regulation is expected to be minimal. The restriction which the rule imposes on commercial tour operators will not require any substantial changes in their operations. While the rule will require certain of the air tour flights to operate at higher minimum altitudes or farther from terrain than at present, this requirement will have no business or operational costs. The comment was made that, as a result of the requirement to remain 500 feet from terrain, helicopter tour operators would suffer loss of revenue because that distance was too far to permit worthwhile viewing of the Anasazi ruins near Point Sublime. The FAA assumes that even at the greater distance there would still be a demand for trips to the site, in conjunction with the other benefits of a helicopter tour, and that the rule would not inevitably lead to a direct loss in revenue. For the purpose of evaluating the impact of the temporary rule, therefore, the FAA concludes that the helicopter operators have not demonstrated a significant economic impact for the temporary duration of this rule. Other commercial flights necessary for Park and Indian reservation

activities, such as air transportation to Indian reservations, will be authorized without substantial change from present operation.

Transient general aviation traffic, which constitutes a minority of canyon overflights, will be restricted only from operating at low altitude. Pilots may still overfly the canyon above 9,000 feet MSL, which at some points is less than 1,000 feet above the north rim of the canyon. En route traffic will not be affected because the Special Flight Rules Area is below the floor of controlled airspace in the area. There is no economic impact on the Department of Defense because there is no official reason for military aircraft to operate over the canyon below 9,000 feet MSL, with the exception of one approved VFR route which crosses the western corner of the Special Flight Rules Area. Because the special rule will have no substantial economic impact on any category of operator, and because the rule is temporary, the FAA has determined that the expected impact of the rule is so minimal that it does not warrant further regulatory evaluation. For the same reasons, this rule (1) is not a major rule under Executive Order 12291, and (2) is not considered significant under Department of Transportation Regulatory Policies and Procedures (44 FR 11034; February 26, 1979).

#### Regulatory Flexibility Determination

The Regulatory Flexibility Act of 1980 (RFA) was enacted by Congress in order to insure, among other things, that small entities are not disproportionately affected by Government regulations. The RFA requires agencies to review rules which may have a "significant impact on a substantial number of small entities." For purposes of the RFA, small entities are considered to include small businesses, non-profit organizations, and municipalities but not private individuals. Small entities affected by this rule are limited to the approximately 40 Part 135 air tour and air taxi operators operating in the canyon area. As discussed under "Economic Impact" above, the rule will not require any change in the operations of these firms which the agency believes would impose an economic cost. As a result, the impact on the affected small entities, if any, will be substantially less than the threshold for significant impact under agency guidelines. Therefore, I certify that, under the criteria of the Regulatory Flexibility Act, this rule will not have a significant impact on a substantial number of small entities.

**List of Subjects in 14 CFR Parts 91 and 135**

Aircraft, Aviation safety, Air taxi and commercial operators, Grand Canyon.

**Adoption of the Special Federal Aviation Regulation**

For the reasons set out above, 14 CFR Parts 91 and 135 are amended by adopting a new Special Federal Aviation Regulation to read as follows:

*Special Federal Aviation Regulation No. 50**Special Flight Rules in the Vicinity of the Grand Canyon National Park, AZ*

**Section 1. Applicability.** This rule prescribes special operating rules for all persons operating aircraft under VFR in the following airspace, designated as the Grand Canyon National Park Special Flight Rules Area:

That airspace extending upward from the surface to and including 9,000 feet MSL within an area bounded by a line beginning at lat. 36°09'30" N., long. 114°03'00" W.; southwest to lat. 36°14'00" N., long. 113°12'00" W.; to lat. 36°30'00" N., long. 112°36'00" W.; to lat. 36°30'00" N., long. 111°42'00" W.; to lat. 35°59'30" N., long. 111°42'00" W.; to lat. 35°57'30" N., long. 112°03'20" W.; thence via the 5 statute mile radius of the Grand Canyon Airport reference point (lat. 35°57'09" N., long. 112°08'47" W.); to lat. 35°57'30" N., long. 112°14'00" W.; to lat. 35°58'00" N., long. 113°11'00" W.; to 35°42'30" 27'30" W.; thence via the 5-statute-mile radius of the Peach Springs VORTAC to lat. 35°41'20" N., long. 113°36'00" W.; thence to the point of beginning.

**Section 2. Definition.** For the purposes of this special regulation, "Park" means the Grand Canyon National Park.

**Section 3. Aircraft operations: general.** Except in an emergency or unless otherwise authorized by the Administrator, no person may operate an aircraft in the airspace described in Section 1 unless the operation—

(a) Is conducted in accordance with a specific authorization to operate in that airspace incorporated in the operator's Part 135 operations specifications and approved by the Las Vegas Flight Standards District Office;

(b) Is authorized in writing by the Las Vegas Flight Standards District Office and is conducted in compliance with the conditions contained in that authorization. Normally authorization will be granted only for operations of aircraft necessary for law enforcement, firefighting, emergency medical treatment/evacuation of persons in the vicinity of the Park, or for support of Park maintenance or activities. Authorization may be issued on a continuing basis; or

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

**Section 4. Commercial sightseeing flights.**

(a) Notwithstanding the provisions of Federal Aviation Regulations § 135.1(b)(2), nonstop 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 airspace described in section 1 during any portion of the flight are governed by the provisions of Part 135.

(b) No person holding or required to hold an operating certificate under Part 135 may operate an aircraft in the airspace described in Section 1 except as authorized by

operations specifications issued under that part.

**Section 5. Minimum terrain clearance.** Except in an emergency, when necessary for takeoff or landing, or unless authorized by the Las Vegas Flight Standards District Office for a purpose listed in section 3(b), 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.

**Section 6. 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 airspace described in section 1 unless he—

(a) Transmits a position report on the appropriate frequency at each reporting point designated in the operator's Part 135 operations specifications or in a written authorization to operate in that airspace issued under section 3, and

(b) Monitors the appropriate frequency continuously while in that airspace.

**Section 7. Effective and termination dates.** This Special Federal Aviation Regulation is effective April 27, 1987 and terminates on June 15, 1987.

**Authority:** 49 U.S.C. 1303, 1348, 1354(a), 1421, and 1422; 16 U.S.C. 228g; 49 U.S.C. 106(g) (Revised Pub. L. 97-449, January 12, 1983).

Issued in Washington, DC on March 23, 1987.

**Donald D. Engen,**  
*Administrator.*

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