



??  
?????????

1635 Prince Street, Alexandria, Virginia 22314-2818 Telephone: (703) 683-4646 Fax: (703) 683-4745

January 26, 2001

Mr. Gary Davis  
Air Transportation Division (AFS-201)  
Flight Standards Service  
Room 831  
Federal Aviation Administration  
800 Independence Avenue SW  
Washington DC 20591

**By Hand Delivery**

Re: *HAI Comments Concerning Proposed New Commercial Routes for the Grand Canyon National Park Special Flight Rules Area, Docket No. FAA-1999-5926, 65 Fed. Reg. 78072 (Dec 13, 2000).*

Dear Mr. Davis:

Helicopter Association International (HAI) submits these comments in response to the Federal Aviation Administration's (FAA's) "Notice of availability and request for comments" concerning "Commercial Routes for the Grand Canyon National Park Special Flight Rules Area," published at 65 Fed. Reg. 78072 (December 13, 2000). These comments have also been submitted to the Department of Transportation Docket Management System, Docket No. FAA-1999-5926, "Modification of the Dimension of the Grand Canyon National Park Special Flight Rules Area and Flight Free Zones."

HAI is the professional trade association for the civil helicopter industry. Its 1,500-plus member organizations and 1,400-plus individual members safely operate more than 5,000 helicopters approximately 2 million hours each year. HAI is dedicated to the promotion of the helicopter as a safe, effective method of commerce and to the advancement of the civil helicopter industry. HAI is proud to count among its members most of the professional helicopter air tour operators in the United States.

On April 4, 2000, FAA published two final rules for Grand Canyon National Park (GCNP), one of which limited the number of commercial air tour operations in the GCNP Special Flight Rules Area (SFRA), 65 Fed. Reg. 17707 (Apr. 4, 2000); the other of which modified the Special Flight Rules Area (SFRA) airspace and enlarged the no-fly zones that restrict both commercial and noncommercial flight in the SFRA, 65 Fed. Reg. 17735 (Apr. 4, 2000). The Commercial Air

Tour Limitations final rule was effective on May 4, 2000; the airspace modifications were scheduled to become effective December 1, 2000.

When the FAA permitted GCNP air tour operators to examine maps (charts) depicting the proposed new commercial air tour routes and the enlarged no-fly zones, but not narratives describing the routes in detail, *see notices of availability of routes in Grand Canyon National Park*, 64 Fed. Reg. 37191 (July 9, 1999) and 65 Fed. Reg. 17698 (April 4, 2000), the operators identified few safety concerns. However, in October, 2000, when FAA provided narrative descriptions of the proposed routes and began permitting GCNP air tour operators to fly the proposed new routes for training purposes, air tour operators identified several significant safety concerns. These safety concerns were submitted to FAA in detail in written comments, court documents, and in meetings with FAA officials.

In response to the GCNP operators' safety concerns, on November 20, 2000, FAA published a final rule delaying the effective date of the Airspace Modification Final Rule until December 28, 2000, "so that the FAA may investigate further some new safety issues raised by the Air Tour Providers." 65 Fed. Reg. 69846 (Nov. 20, 2000). In a notice published on January 4, 2001, FAA advised the public that it had "completed its investigation and based on that investigation is [further] delaying the Airspace Modification final rule pending resolution of some safety issues on the east end of the GCNP SFRA. In a companion document in this Federal Register the FAA also delays the implementation of the routes in GCNP." 66 Fed. Reg. 1002 (Jan. 4, 2001).

HAI submits this comment in response to FAA's invitation, published on December 13, 2000, to provide public comment on proposed new commercial air tour routes, as modified in light of the safety concerns raised by the air tour operators. 65 Fed. Reg. 78072 (Dec. 13, 2000).

### Discussion

- 1. FAA's December 13, 2000, "Notice of availability and request for comments" concerning "Commercial Routes for the Grand Canyon National Park Special Flight Rules Area," 65 Fed. Reg. 78072 (Dec. 13, 2000), Does Not Provide the Public With Adequate Information Upon Which to Base Meaningful Comments.**

As of the date on which this comment is submitted to the docket, GCNP air tour operators have not been provided with detailed narrative descriptions of the proposed new GCNP air tour routes. Detailed route narratives are necessary to permit the public to meaningfully evaluate the proposed new routes on paper, and are required to permit members of the public, particularly air tour operators, to evaluate those routes in flight.

History has shown that the special computer-generated charts of proposed GCNP air tour routes distributed by FAA in connection with the several "notices of availability" have been inadequate to permit interested members of the public to evaluate the safety and efficiency of the various proposed routes depicted thereon. These computer-generated charts do not show terrain features or depict the proposed routes themselves in sufficient detail to permit thorough evaluation.

Moreover, the computer-generated charts of proposed GCNP air tour routes distributed by FAA in the past have contained many significant errors; it is unreasonable to expect critical safety analyses to be based on such documents alone.<sup>1</sup>

Until FAA provides detailed narratives describing the proposed new routes, with particular emphasis on the levels of risk associated with the proposed routes as compared to the existing SFAR 50-2 routes and to any prior proposals that have been subjected to safety, environmental or economic analyses, HAI believes that the public cannot meaningfully evaluate the FAA's proposed new routes and, in effect, is being denied the opportunity to provide meaningful comment. Accordingly, HAI respectfully asks FAA to hold open or reopen the public comment period on proposed new commercial air tour routes at Grand Canyon National Park until a reasonable time after it has made available to the public detailed narrative descriptions of the proposed routes, and industry has been allowed to evaluate the proposed routes in flight.

**2. FAA's Latest Chart of Proposed New Commercial Air Tour Routes at GCNP Indicates That Significant Safety Problems Continue to Exist.**

In response to HAI's request, pursuant to the December 13 notice, for a depiction and description of the proposed new commercial air tour routes at GCNP, HAI received from FAA a computer-generated map, approximately two feet by four feet in size, printed on a white draft paper stock, titled "Grand Canyon VFR Aeronautical Chart (Commercial Air Tour Operators)" and bearing at the top the legend "Not To Be Used For Navigation" in bold red letters about one inch in height and on the right edge at the map border the legend "Printed by smcdanal on Thursday December 07 2000 at 10:03:41 AM EST". The following comments are based on this chart. A narrative description of the proposed new routes was not provided.<sup>2</sup>

**a. Proposed Enlargement of the Toroweap/Shinumo, Bright Angel, and Desert View No-Fly Zones Forces Unsafe Compression of Air Traffic Arriving and Departing GCN Airport, Exceeding the Capability of Pilots to Safely See and Avoid Each Other**

Among the most significant safety issues identified by GCNP air tour operators in November, 2000, was the severe spatial compression of commercial air tour, general aviation, other commercial and military air traffic resulting from enlargement of the no-fly zones that surround Grand Canyon National Park airport (GCN). No proposed solution to this problem is presented

---

<sup>1</sup> We understand that, in an affidavit filed in the GCNP air tour operator's legal case against FAA pending in the U.S. Court of Appeals for the District of Columbia Circuit, Mr. Davis stated on behalf of FAA that the charts of the proposed air tour routes provided to GCNP air tour operators for evaluation contained numerous inaccuracies. Mr. Davis maintained, however, that these inaccuracies would not affect the safety of flight because air tour pilots were to rely on narrative route descriptions in conducting operations. HAI, HAI's members, and the public are unable to evaluate fully the safety of the proposed new air tour routes at GCNP until accurate narratives of the latest proposals are provided for review and analysis.

<sup>2</sup> For the reasons stated in Point 1 above, HAI reserves the right to submit additional comments when detailed narratives of proposed new routes are become available.

on the December 7 chart. In proposing new routes that do not address this most pressing safety problem, FAA appears to be responding to unrealistic implementation deadlines demanded by the National Park Service (NPS). Not so many years ago, a similar constellation of events resulted in a deadly air tour accident at Grand Canyon; the National Transportation Safety Board (NTSB) attributed that accident in large part to FAA's failure to resist NPS's ill-conceived airspace demands. Shortly after that accident, FAA implemented the current route and airspace structure under SFAR 50-2. There have been no fatal accidents, and no damage or injuries, attributed to the current SFAR 50-2 route and airspace structure. HAI trusts that FAA will not permit history to repeat itself in this most tragic manner.

During daylight hours, GCN operates as a tower-controlled airport without radar services. As such, the airport is surrounded by a cylinder of Class D controlled airspace from the surface to 2500' AGL having a radius of three miles (with a southwesterly extension one additional mile). As noted in the Aeronautical Information Manual, paragraph 3-2-5, in Class D airspace, "No separation services are provided to VFR aircraft."

The proposed Toroweap/Shinumo enlarged no-fly zone lies west-northwest of GCN. The proposed enlarged Bright Angel no-fly zone abuts the northern third of GCN Class D airspace. The proposed enlarged Desert View No-Fly Zone lies east-northeast of GCN. All proposed enlarged GCNP no-fly zones extend from the surface to an altitude of 14,500' MSL.

Because of the close proximity of the proposed enlarged no-fly zones to the boundary of GCN Class D airspace and to one another, arriving and departing aircraft are forced into narrow corridors east and west of GCN. When permitted to fly the proposed new air tour routes in October, 2000, GCNP air tour operators observed severe spatial compression of arriving and departing airplanes and helicopters within and just outside GCN Class D airspace to the west-northwest and east of GCN from points near the runway to the southern entrances of the Dragon and Zuni Point Corridors, respectively.

Aircraft that would be forced together into these compressed airspaces by the constriction of the proposed airspace structures depicted on the December 7, 2000, chart would include air tour helicopters and airplanes, other commercial airplanes (some small and slow, others larger and faster), general aviation airplanes and occasionally general aviation helicopters, military airplanes and military helicopters. These aircraft exhibit a wide variety of performance capabilities and handling characteristics; some are capable of rapid climbs even in the high density-altitude conditions that prevail at GCNP much of the time. Others can climb only very slowly and with great effort. Some can maneuver quickly and tightly; others must turn slowly and cautiously under conditions commonly encountered at GCNP.

Because GCN has no radar capability, GCN tower personnel do not assist pilots in maintaining appropriate separation between aircraft; pilots must rely entirely upon the "see and avoid" self-management method of collision avoidance.

Compression of this thick mix of arriving and departing, climbing and descending aircraft of widely varying performance characteristics and capabilities is not consistent with collision avoidance solely by the “see and avoid” method. To require pilots of such a mix of aircraft to navigate precisely within narrow arrival and departure corridors while working feverishly to “see and avoid” a variety of other aircraft climbing and descending in close proximity is an obvious invitation to disaster.

We understand that GCN Tower personnel have stated that they will take no responsibility should a collision occur within the Class D airspace or just outside it, despite the fact that the ground tracks outlined in a proposed Letter of Agreement between GCN Tower and GCNP air tour operators reportedly result in near head-on traffic convergence without adequate space for evasive maneuvering. HAI cautions FAA that denial will not likely absolve the agency of responsibility or liability should a collision occur.

The existing SFAR 50-2 air tour route and airspace structure has proven successful in the “see and avoid” environment of the Grand Canyon. The proposed route structure and airspace design result in an unacceptable reduction in the level of aviation safety at GCNP.

With respect to the arrival and departure traffic to and from the GCN airport, only a limited range of options exists to maintain a level of safety equivalent to that of the SFAR 50-2 route and airspace structure:

- Restoration of the no-fly zones and ground tracks affecting GCN Class D arrival and departure traffic to the SFAR 50-2 configuration;
- Reduction of the proposed no-fly zones to a sufficient degree to permit substantial widening of arrival and departure tracks to lessen the spatial compression of aircraft arriving and departing GCN, provided these ground tracks would offer the same degree of safety as those presently flown; or
- Implementation of separation assistance services to pilots arriving and departing GCN by installing a radar system at GCN and converting the existing Class D airspace to Class C airspace.

HAI believes that each of these cures for the unsafe conditions currently proposed will require formal rulemaking action, environmental analysis, and noise modeling. We look forward with urgency to publication of FAA’s option of choice in this matter for public evaluation and comment.

In a matter of equally serious concern, HAI understands that FAA may be considering implementing unpublished arrival and departure procedures at GCN. HAI would take strong exception, on both safety and legal grounds, to the publication of an official navigation chart that does not reflect the procedures actually implemented. Pilots plan their flights and conduct them based on their study of charted conditions and airspace characteristics, relying on aeronautical

charts to depict conditions, requirements and restrictions as they really are. To publish an aeronautical chart knowing that it would not accurately reflect operational conditions at GCNP would significantly increase the risk of accident by providing pilots with false information. In HAI's view, this would constitute violation of the Administrative Procedure Act and other statutes, and may expose FAA (and potentially FAA personnel) to substantial risk of liability for ensuing losses. HAI trusts that rumors to this effect are entirely unfounded.

**b. Spatial Compression of the Proposed Helicopter and Airplane Air Tour Routes in the Area of the Zuni Corridor generally between Gunthers Castle and Temple Butte Presents an Unacceptably High Risk of Mid-Air Collision.**

Proposed enlargement of the Bright Angel and Desert View no-fly zones results in spatial compression of airplane traffic on the proposed Black 1, 2 and 2R air tour routes and helicopter traffic on the proposed Green 1 and 3X air tour routes in the area of the Zuni Corridor between Gunthers Castle and a point slightly northwest of Temple Butte. This compression occurs over rugged terrain and, during the busy months of the air tour season, in high density-altitude conditions. Under such conditions, helicopters (which are required to climb to 9500 MSL northeast of this area) can easily climb at a faster rate than many GCNP air tour airplanes (which are required to climb to 9,000 MSL in this area and to 10,000 MSL northeast of this area).

The following unsafe conditions converge at the north end of the Zuni Point Corridor slightly southeast of Gunthers Castle:

- The proposed Green 1 helicopter air tour route weather turnaround potentially places helicopter traffic headed southeast and descending to 7500' MSL into conflict with helicopter traffic headed north at 7500' MSL on the proposed Green 1 route and headed northeast at 7600 or 7800 MSL (the altitude assignment depicted on the December 7 chart is not legible) on the proposed Green 3X helicopter route.
- The proposed Black 1 airplane air tour route weather turnaround potentially places airplane traffic headed south-southeast at 10,000 MSL into conflict with airplane traffic headed north at 9000 MSL on the Black 2 airplane air tour route, headed northeast at 9000 MSL on the proposed Black 2X-4 route, and headed southwest at 8500 MSL on the proposed Black 2E-4 route.
- Helicopter air tour traffic on the proposed Green 1 route leading to the proposed weather turnaround is separated by only 500 feet of altitude from airplane air tour traffic on the proposed Black 1 Route leading to that proposed weather turnaround.

Under conditions of bad weather, when these weather turnarounds must be used, a nominal 500 feet of vertical separation is not sufficient to provide an acceptable level of safety in the GCNP "see and avoid" non-radar environment.

Under these conditions, the risk of a midair collision in this area is unacceptably high under the proposed route structure.

The only way to address this serious safety problem in the context of the December 7, 2000, chart is to significantly widen the Zuni Corridor between Gunthers Castle and Temple Butte.

3. **Connecting Proposed New Routes On The West End Of Grand Canyon To Existing SFAR-50-2 Routes On The East End Of Grand Canyon Will Require Separate Evaluation of Safety, Environmental Impact, Economic Impact, Feasibility, And Noise Contribution.**

In its notice, “Commercial Routes for the Grand Canyon National Park, delay of effective date” published at 66 Fed. Reg. 1002 (Jan. 4, 2001), FAA stated that “if the issues on the east end cannot be resolved by April 1, 2001, the FAA may implement the routes on the west end of the GCNP SFRA (Blue Direct North, Blue Direct South, Green 4, Blue 2 and Brown routes) while maintaining the SFAR 50-2 route structure on the east end. The goal for a partial implementation also is spring 2001.”

Comparison of the existing SFAR 50-2 air tour route structure with the proposed new route structure indicates that connecting the proposed new routes for the west end of Grand Canyon to the existing SFAR 50-2 routes in the east may require development of new route segments. Such new route segments, if required, have not been noticed for public comment – with or without detailed narrative description – and have not been subjected to safety analysis, environmental impact analysis, economic impact analysis or feasibility review, nor has the resulting noise impact of such new route segments been modeled, or even considered. HAI believes that the Administrative Procedure Act, Administrative Procedure Act, 5 U.S.C. §§ 551 et seq. (1946, as amended), the National Environmental Policy Act, 42 U.S.C. §§ 43 et seq. (1970, as amended), the National Parks Overflight Act, Pub. L. No. 100-91, 101 Stat. 674, (1987), see note following 16 U.S.C. § 1a-1, the Paperwork Reduction Act, 44 U.S.C. §§ 3501 et seq. (1980, as amended), the Small Business Regulatory Enforcement Fairness Act, Pub. L. No. 104-121, §§ 201 et seq. 110 Stat. 857, (1996), and other laws mandate the completion of these analyses, publication of the proposed connecting route segments, an appropriate opportunity for public comment on the proposed new route segments and the respective analyses and FAA’s consideration of those public comments before any such new route segments may be implemented at Grand Canyon National Park.

Moreover, even if the proposed new air tour routes on the west end of Grand Canyon can be married to the existing SFAR 50-2 routes on the east end of Grand Canyon, HAI believes that the interaction between (a) the existing SFAR 50-2 routes on the east end with (b) the enlargement of the no-fly zones and the resulting reduction in the separation of air tour flight tracks, must be separately considered in safety, environmental, economic, feasibility and noise modeling and analyses. This interaction between the proposed new and larger no-fly zones on the east end of Grand Canyon with the existing SFAR 50-2 air tour route structure has not been analyzed. HAI believes that the Administrative Procedure Act, 5 U.S.C. §§ 551 et seq. (1946, as amended), the

National Environmental Policy Act, 42 U.S.C. §§ 43 *et seq.*, (1970, *as amended*), the National Parks Overflight Act, *Pub. L. No. 100-91, 101 Stat. 674*, (1987), *see note following 16 U.S.C. § 1a-1*, the Paperwork Reduction Act, 44 U.S.C. §§ 3501 *et seq.*, (1980, *as amended*), the Small Business Regulatory Enforcement Fairness Act, *Pub. L. No. 104-121, §§ 201 et seq., 110 Stat. 857*, (1996), and other laws mandate the completion of these analyses, publication of the results, an appropriate opportunity for public comment and FAA's consideration of those public comments before the proposed larger no-fly zones may be implemented in connection with the existing SFAR 50-2 routes on the east end of Grand Canyon National Park.

### Conclusion

Each of the characteristics of the proposed new GCNP air tour route structure discussed in this comment represents a significant reduction in aviation safety compared to the existing SFAR 50-2 route and airspace structure. Changes from the existing SFAR 50-2 structure that significantly reduce aviation safety are not acceptable. SFAR 50-2 has been a safe and highly effective regulation that requires no changes. However, if changes are to be made, HAI believes that FAA has no choice but to develop, adequately notice for public comment and implement only changes that maintain a level of aviation safety equivalent to that of SFAR 50-2.

Options exist to maintain a level of safety equivalent to that of SFAR 50-2. HAI believes that, as a matter of law but more importantly, as a matter of safety, if changes to SFAR 50-2 are made, FAA has an unavoidable obligation to explore, develop, and, by appropriate rulemaking actions, implement safer proposals than those found in the December 7, 2000, proposed GCNP air tour route chart. We look forward to working closely with FAA to explore these options.

Sincerely,



Roy Resavage  
President