

incentives to replace current aircraft with those satisfying the definition must be recommended by the NPOAG. Thus, any proposals to encourage the transition to quiet technology will be addressed in subsequent FAA rulemaking in consultation with the NPS and the NPOAG.

6. Removal of Temporary Cap

A number of commenters addressed the proposal to remove the cap on air tour aircraft for all Category C aircraft. This change was proposed as an incentive for conversion to noise efficient aircraft.

Since the Noise Limitations NPRM, the FAA has issued a final rule that replaced the cap on the number of air tour aircraft with an operations limitation on the annual number of commercial air tour operations in the GCNP SFRA (65 FR 17708). Thus, a discussion of the comments on the removal of the air tour aircraft cap is irrelevant. The Air Tour Act provides that "Commercial air tour operations by any fixed-wing or helicopter aircraft that employs quiet aircraft technology and that replaces an existing aircraft shall not be subject to the operational flight allocations that apply to other commercial air tour operations of the Grand Canyon, *provided that the cumulative impact of such operations does not increase noise at the Grand Canyon.*" (See section 804(c) of the Act; emphasis added). As discussed below, the FAA does not foresee at this time that the operations limitations would be lifted in any meaningful way since once commercial air tour operations increased, noise would increase, even if all operators used quiet technology aircraft.

As documented in the February 2000 FSEA accompanying the commercial air tour limitation final rule, only 44 percent of the Park (on an annual average day) achieved substantial restoration of natural quiet upon implementation of the air tour limitations and changes to routes and airspace adopted in April 2000. The FAA and NPS note that this percentage may change once the revised east end routes are adopted and implemented. The FAA has evaluated whether the designation of quiet technology requirements, contained in this SNPRM, will enable the FAA to relieve commercial air tour operators from the present commercial air tour operations limitation. More specifically, the FAA conducted studies to determine the extent to which use of quiet technology aircraft could possibly enable air tour operators to increase operations without increasing cumulative noise levels at

GCNP pursuant to section 804 of the Air Tour Act.

The FAA test was conducted by assessing the sensitivity of the 25% TA_{12hr} ⁵ contour to increases in quiet technology aircraft operations using the GCINM. The 25% TA_{12hr} contour has been the measure used in the environmental assessments associated with all GCNP SFRA rulemaking to assess progress towards the goal of substantial restoration of natural quiet. The particular GCNP air tour scenario chosen for this test was the preferred alternative of the February 2000 FSEA that accompanied the April 2000 final rules (65 FR 17708 and 65 FR 17736). Two separate runs of the GCINM were performed; airplane operations on Zuni Reverse and helicopter operations on the Green 1 loop. The analysis found that adding less than four annual airplane operations or three annual helicopter operations would increase the 25% TA_{12hr} contour area by 0.01 sq. mi. FAA chose a hundredth of a square mile as the threshold of significance because contour areas in the GCNP EA documents have been reported to that significant digit.

The above result supports the FAA's preliminary finding that aircraft that meet the quiet technology designation operating without operations limitation will likely cumulatively increase noise in the GCNP. Given that the Air Tour Act only provides relief from the operations limitation when the cumulative impact of such operations does not increase noise at GCNP, the FAA would likely be unable to remove the commercial air tour operations limitation. Removal of the operations limitation will be addressed in subsequent FAA rulemaking in consultation with the NPS and the NPOAG as directed by the Air Tour Act.

7. Other or Alternative Incentives

A number of commenters responded to the FAA's request for comments regarding alternative or additional incentives for operators to convert to noise efficient technology.

Lake Mead Air (26, 53) states that with the conversion to "quieter aircraft" several companies will not be able to

meet the standard and will sell or close. Other incentives for quiet aircraft technology should be considered such as tax credits or subsidies, for example the FAA could pay the air tour operators not to fly Category A aircraft, similar to soil banks. Furthermore, more noise efficient aircraft should be phased in rather than phasing out the less noise efficient aircraft.

Twin Otter (45) states that it is an oversight that the FAA has not provided for a quiet aircraft corridor in the eastern section of the canyon. Twin Otter then comments on routes proposed in 1996 that are no longer part of this rulemaking.

Twin Otter recommends the following additional incentives for Category C aircraft: (1) Lift the aircraft cap immediately on the number of Category C aircraft that may be operated; (2) eliminate the curfew for Category C aircraft, and if this is not possible, then permit Category C aircraft to operate one hour before and one hour later than curfew hours for conventional aircraft (official sunrise at GCNP is two hours earlier than the curfew permits for most of the summer); (3) roll back the overflights fee for Category C aircraft as an additional incentive; and (4) require helicopters to fly at the highest possible altitude in the Zuni Corridor so that airplanes can conduct tours at a lower altitude and establish the lowest airplane tours in the Zuni for Category C qualifying aircraft.

Grand Canyon Airlines (GCA) (46) supports the concept of the proposed amendment to part 93. GCA also believes that the FAA needs to provide quiet aircraft incentive routes in the eastern region. Category B helicopters are permitted to operate at the lowest possible altitude in the eastern region and they are even encouraged to fly in the most sensitive Dragon Corridor with the lowest altitudes and shortest direct routes. This makes the airplane Category C air tours less attractive than the noisier Category B helicopters in this region. To correct this disparity the Category C aircraft should be given the lowest possible routes in the eastern region. GCA makes the following recommendations: (1) Provide a Category C incentive route over the existing Black 1 route; (2) minimize advantages to Category B helicopter routes by creating new Category C routes that provide superior tour features; (3) waive overflight fees to Category C aircraft; and (4) eliminate caps and curfews on Category C aircraft.

Papillon (55) also supports the timeframe for transition to quiet technology and the guidelines for qualifying aircraft as quiet technology,

⁵ The time above (TA) metric provides the duration that aircraft related noise exceed specified sound threshold. For assessment of aircraft noise in GCNP, the % TA_{12hr} represents the percentage of time aircraft are audible during the 12-hour daytime period of primary visitor activity. The 25% TA_{12hr} contour (the area where aircraft are audible greater 25% of the time) measures the extent that the criterion for substantial restoration of natural quiet is met. When the 25% TA_{12hr} contour for a particular alternative occupies less than half of the area of GCNP then that alternative has achieved substantial restoration of natural quiet at the Park.