

every park that has air tour operations and to (1) give preference to operators using quiet technology aircraft, and (2) for limited capacity parks, incorporate the use of quiet technology aircraft as a selection criteria in the competitive bidding.

- HAI does not agree with the proposed terminology, “Quiet Technology Designation,” as it is too general a term and potentially misleading when utilized beyond the narrow scope of air tours in the GCNP. It should not be used for defining new technology aircraft. The thrust of the SNPRM is to create a designation for quieter aircraft that will be used for air tours in the GCNP and to create potential incentives for operating quieter air tour aircraft with a relative increase in seat loading. There is, however, the political reality that the term QTD could migrate to other areas of the country that are not necessarily national parks. QTD has the potential to be used as justification by local zoning boards and planners for prohibiting heliports or helicopter operations in various municipalities. It is therefore recommended that the QTD designation be redefined as a “Quiet Air Tour Designation” (QATD) to be applied for the GCNP and any future migration of the standard to other national parks. The term “QTD” may have innumerable future political consequences that were not part of the mandate to determine what quiet technology should be used in GCNP.
- An economic impact assessment, including a benefit-cost analysis, should be performed prior to issuance of a final rule. This assessment should be designed to address the potential broader economic implications of the “QTD” including any adverse impacts to the helicopter manufacturing and operating industries not associated with the GCNP noise issue.

As requested in the SNPRM, the following are responses to specifically posed questions:

1. How reasonable is the noise efficiency approach (larger aircraft with more passenger seats are allowed to generate proportionally more noise) to define quiet technology and how appropriate is the use of certificated noise level as the basis?

- It is HAI’s opinion that the noise efficiency approach to define quiet technology is sound, and allows for larger aircraft (and resultant increase in seats) to generate proportionally more noise (but as envisioned, less numbers of overall flights). The proposed QTD is defined in terms of *the number of seats*; however, there is not a clear definition of what is meant by *the number of seats*. It is assumed from the discussion in the SNPRM that this refers to the *number of passenger seats*. This still requires further clarification since, although small helicopters usually have the provision for a second pilot, they are normally operated in tour operations with the second pilot seat and with appropriate controls removed to incorporate an extra passenger seat. On a few helicopters, *kits* are also available which allow the second pilot seat to be replaced by two (2) passenger seats. These configurations are subject to certification by the appropriate airworthiness authority. To avoid confusion, it is recommended that the term *number of seats* be defined as: “*maximum number of passenger seats for which the individual helicopter is certificated.*”

- It is felt that the use of certificated noise level as the basis for establishing noise efficiency is reasonable. However, HAI *disagrees* with the “10log” slope of the curve used to delineate those aircraft above two seats that meet the QTD limitation for two reasons: 1) It eliminates advanced derivative aircraft; and, 2) It will eliminate all recent low noise designs in the intermediate and large categories (e.g., EC155 and EH-101), and will become increasingly difficult to meet by larger helicopters (which contradicts the intended goal of the “QTD” SNPRM to foster use of quieter, higher passenger helicopters). 12log is a reasonable compromise between the proposed 10log slope (the generally accepted scaling of traditional helicopter technologies with gross weight) and the 13 to 17log slope scaling with gross weight demonstrated by current technology NOTAR and Fenestron aircraft. A slope of 12log will provide economically reasonable and achievable technical goals for future designs. The 12log slope would allow some of the new technology aircraft that have been developed in recent years to fall under the proposed QTD. In effect, the proposed QTD 10log slope actually eliminates more modern and technologically advanced aircraft. For example, for larger aircraft, the EH101 is known to have a large amount of noise reducing technologies and this aircraft falls outside of the 10log slope of the QTD curve. The new EC145 operates 6.7dB under the ICAO limits, yet fails the 10 log “QTD” test. The proposed 10log slope also eliminates more modern and technologically advanced *derivative* aircraft and keeps the earlier versions as meeting the QTD. For example, the EC135T2 fails the 10log QTD test, although it is a more advanced derivative than its predecessor model, which passes the QTD test.

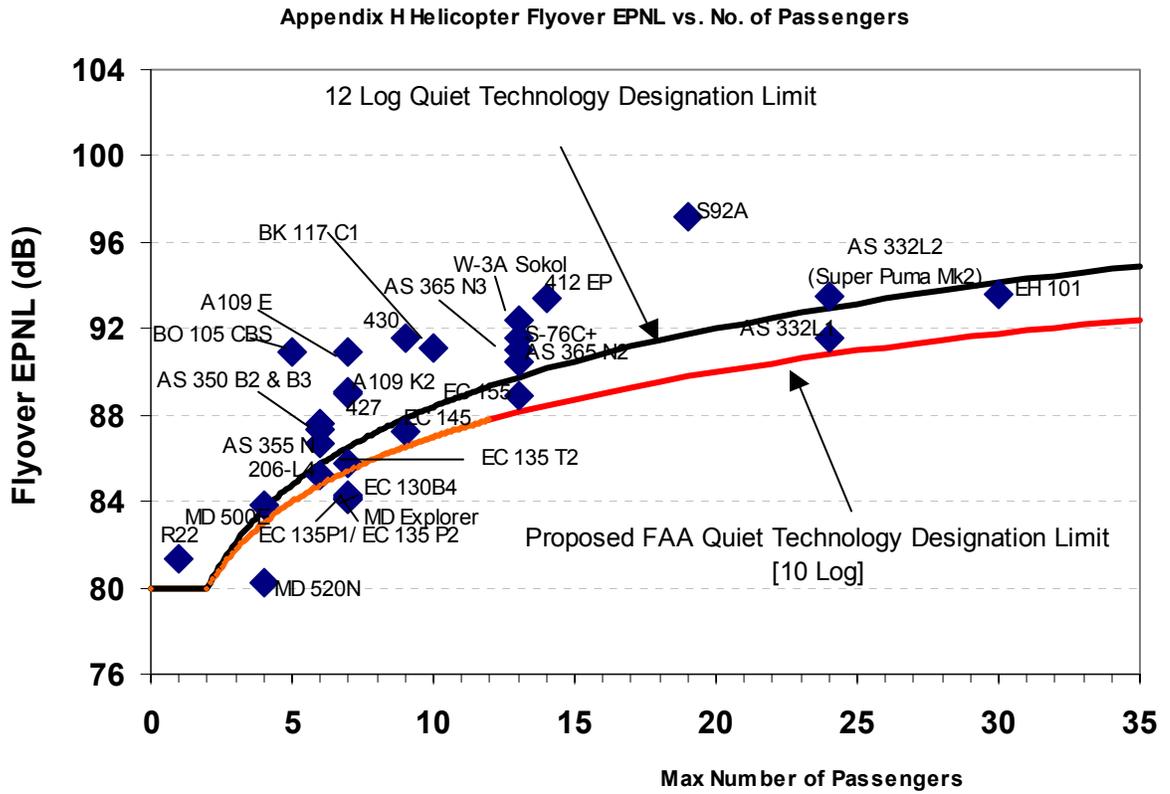


Figure One

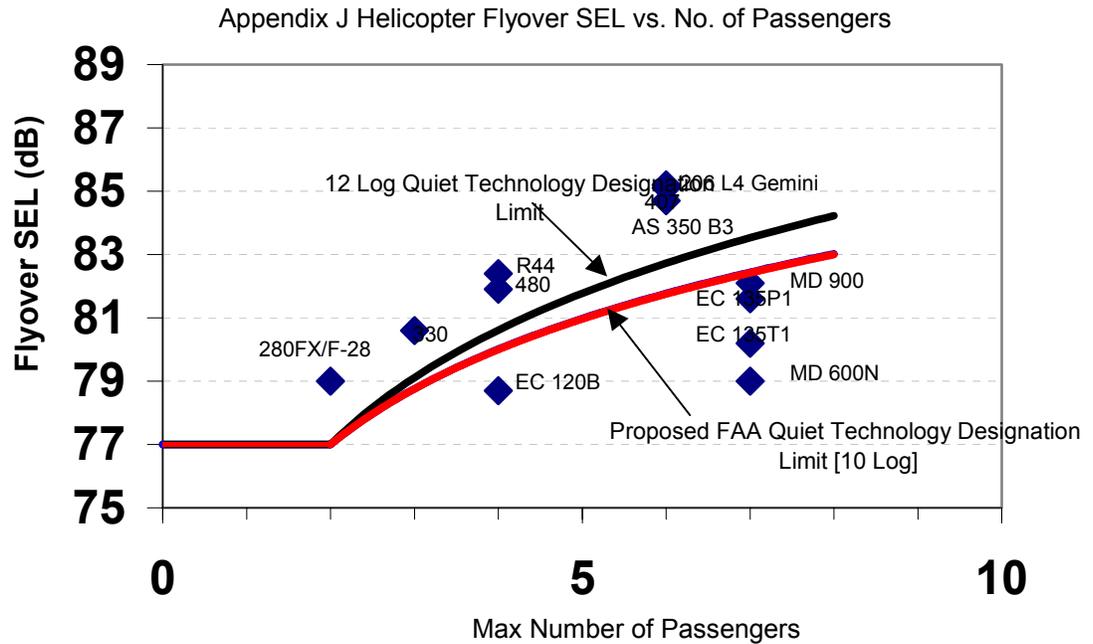


Figure Two

Aircraft that have better operating performance and lower direct operating costs as well as those aircraft that have been developed and derived from other models for those purposes, should not be arbitrarily eliminated. Figures one and two illustrate the Appendix H and Appendix J Helicopter Flyover Noise Levels (in EPNL and SEL respectively) plotted against the maximum number of passenger seats. The 10log slope proposed in the SNPRM is shown in relation to the proposed 12log slope.

- HAI feels that the “QTD” for helicopters should be limited to small or light helicopters with a limited number of passenger seats (12 or less passengers). Historically, because of the economics of the air tour industry and the “viewing ability” by passengers who desire window seats for air tours, intermediate and large helicopters have not been effective or economical for use in GCNP tour operations. Therefore, the QTD should only include smaller or lighter helicopters with a fixed maximum number of passenger seats to avoid any misleading use of the designation.

2. What provisions should be made for changes in technology that result in source noise reduction and/or increased noise efficient aircraft designs?

HAI recommends that incentives for research and development for source noise reduction technologies should be made available to both manufacturers and others for developing Supplemental Type Certificates (STC). These incentives could be in terms of research grants or directed appropriations in the NASA budget. As modifications and STCs are developed that do in fact reduce source noise and/or increase noise efficient aircraft designs, operators of these modified aircraft should be allowed increased operations within GCNP either through numbers

of operations, additional eligible daytime hours to be flown, or additional routes that may not be available to other, non QATD aircraft.

3. What operational and economic incentives should be considered in order to achieve the transition to quieter aircraft and how should the quiet technology designation be used in the establishment of the incentives?

There are a number of incentives that HAI recommends applying to those operators who purchase, upgrade, or modify their tour fleets to achieve noise efficiency in consonance with the quiet technology mandate. The following incentives are recommended:

- HAI recommends a 10% tax incentive and/or accelerated depreciation to operators who purchase equipment that meets the QTD. This has been done successfully in the past.
- Operationally, HAI recommends an exemption to all caps and curfews for all QTD aircraft.
- Routes should be expanded to allow operations over additional portions of the GCNP for QTD aircraft.

4. Should incentives include a “flexible” cap that would permit increasing operations of aircraft based upon the acquisition of leading edge noise efficient technology by operators?

Yes. A flexible cap, which would include no cap for QTD aircraft, would provide an incentive to operators. Additionally, the cap on operations should be raised when operators fly in a way that does not increase the overall noise limits. In other words, flying at reduced gross weight, reduced RPM, and reduced airspeed, or varying altitudes can all reduce noise by not employing the acquisition of new technologies. Credit should be provided to those operators who fly in an approved “noise abatement” flight regime. It can be assumed that application of these noise abatement procedures will yield noise levels less than that of the noise certification levels, and that these could be developed and submitted as a flight manual supplement for flight within GCNP.

5. Should growth be tied to an incentive system for existing operators to convert their fleet to quiet technology?

The degree of growth is immaterial, as long as the established noise mandate is maintained. Incentives for purchasing quieter technology aircraft are contained in the answer to question 4 above. However, incentives should be encouraged, even for operational changes that reduce noise levels. These operational changes include reduction in airspeed, RPM, gross weight, and varying altitudes.

6. What operational limitations (phase-out, expanded curfews, noise budgets, quota system, etc.) should be considered and how should the quiet technology designation be used in the setting of the limitations?

The following apply:

- The key operational limitation that should be adjusted when operators employ quiet technology should be the elimination of all caps and curfews, with the possible exception of brief periods at sunrise and sunset. The established curfews are key periods for tour operators, and their implementation have caused significant loss of revenue.
- A phase out of aircraft should not be necessary, as other operational incentives will cause an increase in quiet technology aircraft.
- Manufacturers should be provided tax relief for the development of noise abatement techniques. Operators flying in the GCNP can incorporate these operational flying techniques into the flight manual for use.

Thank you for the opportunity to comment on behalf of the members of the Helicopter Association International.

Sincerely,

A handwritten signature in black ink, appearing to read "Roy Resavage". The signature is fluid and cursive, with a large, stylized initial "R" and "R".

Roy Resavage
President