

to shore. The floats provide additional time to exit the aircraft. For this reason, the proposed rule would also require that all passengers wear an approved un-inflated life preserver throughout commercial air tours conducted over water beyond any shoreline with an aircraft. This would apply whether or not the airplane is within gliding distance of the shoreline, and, for helicopters, whether the helicopter is capable of autorotating to the shoreline. The costs associated with this provision include: (1) Procurement, (2) maintenance (including the incremental cost of vest replacement), and (3) additional operating costs associated with the weight of the vests. In the absence of reliable data on the number of air tours conducted over water beyond any shoreline, the FAA assumes that of the approximately 2,850 airplanes and 450 helicopters currently engaged in air tour or sightseeing service 25 percent of these aircraft would be affected by these provisions. Thus some 713 airplanes and 112 helicopters would incur costs. The FAA requests comment on this assumption and requests that comments be accompanied with clear and supporting economic documentation. The FAA estimates that incremental costs associated with this provision would total approximately \$2.2 million (\$1.4 million, discounted) over ten years.

The proposed rule would require that an air tour operator complete a helicopter performance plan before each helicopter flight. The pilot in command would be required to comply with the performance plan. The plan must be based on information in the helicopter flight manual, considering the maximum density altitude to which the operation is planned, and must address such elements as maximum gross weight and center of gravity (CG), maximum gross weight and CG for hovering in or out of ground effect, and maximum combination of weight, altitude and temperature. The FAA estimates that the cost of this provision would total approximately \$7.6 million (\$4.7 million, discounted) over ten years.

The proposed rule would require that passengers be briefed before takeoff for an air tour flight with a flight segment that is conducted over water beyond any shoreline. The briefing would include information on water ditching procedures, use of personal flotation gear, and emergency egress procedures. The FAA estimates that incremental costs associated with this provision would total approximately \$1.5 million (\$900,000, discounted) over ten years.

Consumer Losses

Air tour passengers may incur direct costs or opportunity costs as a result of this proposed rule. These costs could be attributable to either a tour operator exiting the tour business as a result of this proposed rule or an increase in flight cancellations due to the proposed minimum flight altitudes, visibility, and cloud clearance requirements. The FAA is unable to provide a quantitative estimate of these losses. However, based on the assumptions made in this evaluation, the FAA has estimated the number of air tour flight hours lost. Assuming one-hour tours, there would be approximately 46,000 fewer air tours available to the public or approximately 92,000 fewer air tour flights assuming half hour tours. The FAA requests comments on how the dollar value to consumers of the lesser availability of air tours should be estimated in the final rule.

Analysis of Benefits

The FAA estimates that the proposed rule would accrue annual benefits of approximately \$49 million, for total benefits of \$490 million (\$301 million, discounted) over ten years. The FAA believes the proposed rule would improve the safety of commercial air tours throughout the country. The benefits associated with individual provisions are described below.

The purpose of requiring air carrier certification is to reduce the number of accidents and incidents associated with sightseeing operations. Based on a comparison of accident rates for part 91 sightseeing tours and part 135 commercial air tours, the FAA estimates that restricting the 25-mile exception under § 119.1(e)(2) could produce benefits of \$48 million (\$30 million, discounted) over ten years.

The estimated benefits associated with minimum altitude, visibility, and cloud clearance requirements can be attributed to: (1) Increased time available for the pilot to react in an emergency, (2) prevention of situations in which the pilot unexpectedly encounters IMC, and (3) avoidance of adverse weather conditions. Estimated benefits are based on an analysis of Hawaiian air tour operations because data for this region are the most complete. This data is different from the data used in the part 119 exception analysis since it includes 10 accidents occurring prior to 1993. It is being employed since it is the best representative data to address the proposed weather provisions. The causes of accidents involving commercial air tours appear, from the

data available, to be relatively uniform throughout the country (inadvertent Instrument Meteorological Conditions (IMC), Controlled Flight Into Terrain) and commercial air tours, wherever they occur, tend to have similar characteristics (they fly relatively slow, low, and close to physical landmarks). This analysis shows that the rate of air tour accidents related to low flying and weather is approximately 9.49 accidents per million flight hours. The analysis also shows that while the part 135 accident rate is lower, the fatality rate is much higher than that of part 91 operators. This apparent anomaly is due to two factors: (1) At least for airplane operations, part 121/135 operators tend to have larger airplanes and carry more passengers, therefore, a single fatal accident in a large airplane can significantly raise the fatality rate, and (2) although rare, the typical part 121/135 commercial air tour accident involves controlled flight into terrain at cruise speed, resulting in a high fatality rate and few survivors. On the other hand, part 91 commercial air tour operators experience more accidents than part 135 operators but a higher proportion result from mechanical problems. Accidents caused by mechanical problems are often survivable, particularly helicopter accidents. The FAA estimates that the potential ten-year benefits for the affected air tour fleet would be approximately \$405 million (\$249 million, discounted).

The benefits associated with helicopter flotation systems and personal life preservers are considered together. Based on an analysis of three overwater accidents, one of which occurred prior to 1993, the FAA estimates that the potential benefits for flotation systems and life preservers are \$37 million (\$23 million, discounted) over ten years. While Hawaiian air tour operators usually cannot adjust their routes to avoid flying over water, it is possible that air tour operators on the mainland might have more opportunities to adjust their routes to avoid the fuel penalty and the expense of a flotation system. However, even on the mainland, many of the known commercial air tours fly over water at Lake Mead; Niagara Falls; the Statue of Liberty; Ocean City, Maryland; in Alaska and in Florida. The FAA does not know what effect these possible route adjustments would have on the estimated benefits or consumer enjoyment. The FAA therefore requests comments, including economic data, on this issue.