



Noise in the Parks

By Robert W. Moorman

In this on-going series, Vertiflite studies the issue of helicopter noise in US national parks and wilderness areas.

Grand Canyon

Helicopter noise over populated areas generates the most concern among residents and local leaders these days. But some say the genesis of noise concern in the US began many years ago when air tour operators began flying daily flights over the Grand Canyon, a natural wonder carved out of rock that is 277 river-miles (446 km) long, nearly 18 miles (29 km) wide, and a mile (1.6 km) deep.

In the 1960s, Elling B. Halvorson, head of a construction company, won a contract to build a water pipeline from the North to the South Rim of the Grand Canyon, using helicopters for the project. Not long after, Halvorson began flying tourists over the Canyon. Today he is chairman of air tour operator Papillon Airways Inc.

At the time, air tours did not sit well with those tourists and environmentalists who preferred their

Blue Hawaiian Helicopters offers tours of all four of the major Hawaiian islands, including Volcanoes National Park and the Pu'u'Ō'ō vent on The Big Island. (Blue Hawaiian photo)

Canyon experience sans aircraft noise. They complained loudly to lawmakers. In January 1975, the US Congress passed the Grand Canyon Enlargement Act to protect the natural beauty of the park, but federal agencies did little to alleviate noise or specify operating parameters over the Canyon.

Then, on June 18, 1986, air tour operator Grand Canyon Airways, operating a fixed-wing de Havilland Twin Otter, collided with a Bell 206 helicopter operated by Helitech Choppers. Twenty-five people on both aircraft were killed in the mid-air collision that occurred by the Scorpion Creek area near Crystal Rapids. At the time, around 40 air tour operators flew over the Canyon, according to one published report.

The tragedy prompted FAA and the US National Park Service (NPS) to set guidelines on air tours, which was followed by passage of the 1987 National Parks Overflights Act (Public Law 100-91). The generally-worded law

set standards for overflights of national parks, including the Grand Canyon. The FAA and the NPS were ordered to “substantially restore the national quiet and experience” of Grand Canyon National Park.

But in 2011, the Overflight Act was watered down, according to environmentalists. Sen. John McCain (R-Ariz.) and Sen. Harry Reid (D-Nev.) attached a rider to a transportation bill that, in effect, could allow for additional flights over the Grand Canyon if air tours operated quiet technology aircraft. Flight allocation limits in the first quarter of the year would not be counted if tour companies operated quiet technology aircraft.

Language in the Rider essentially redefined what constitutes a quiet operating environment, environmentalist claim. The Act still mandates flight free zones in certain areas of the Park. Tour companies still have to maintain specified altitudes and no flights are allowed below the

south rim of the Canyon. There are also curfews and a cap on annual flights to the Canyon (see the FAA Q&A sidebar).

The Grand Canyon Special Flight Rules Area (SFRA) allows 93,971 commercial fixed and rotary wing air tour flights per year in the Park. Yet the SFRA also allows the Hualapai Native Americans additional 'exempt' flights in the west end of the SFRA (the tribe lives in and near the Grand Canyon). The 'exempt' flights are not in the Park, but affect the "soundscape in the west end of the Park," said one environmental group. The Hualapai exemption in the SFRA has increased significantly in recent years: in 2007, there were 45,013 Grand Canyon overflights; in 2013, the FAA increased the exemption to 254,013 flights per year.

Much of the 1.2 million acres (493,000 ha) of the Grand Canyon is encompassed by the National Park. (Readers may go to the Grand Canyon National Park website – www.nps.gov/grca – for additional information.) While most of the 93,971 allocations in the Park are used, the Hualapai exempt flights are still well below the allowable number: only about 52,000 flights were actually made in 2013, but this number is steadily growing. If all the available flights were made as part of the SFRA and the Hualapai exemptions, nearly 350,000 flights could be made per year. In addition, the FAA and NPS are considering making certain in-park flights exempt from the allocations if they meet the criteria for quiet technology aircraft (see 1.usa.gov/1uwouhe).

Environmental Complaints

Environmentalists claim that helicopter noise has gotten worse over the years and there doesn't appear to be any relief in sight. "Air tours are inappropriate in national parks such as the Grand Canyon; however, we are willing to make measured accommodations to resolve the controversy," said Jim McCarthy, who represents the Sierra Club on aircraft noise issues affecting the Grand Canyon.

Opinions differ on the level



Maverick Helicopters operates an exclusive fleet of Eco-Stars, providing breathtaking views of the Grand Canyon. It is the world's largest operator of the EC130 and EC130 T2. (Maverick photo)

of helicopter noise over the Grand Canyon and whether it has increased or decreased since passage of the Overflights Act.

"Over the last several years, it [fixed-wing and helicopter noise] has been fairly stable," said Robin Martin, chief of planning and compliance for the Grand Canyon, NPS. Martin said quiet technology aircraft is helping to reduce the noise footprint in the Park, but so do the various rules and enhancements to the Overflights Act.

McCarthy wants to see noise



Papillon (French for "butterfly") has been giving airplane and helicopter tours of the Grand Canyon since the late 1960s. It operates the largest fleet of sightseeing aircraft in the world, serving nearly a half-million passengers a year. It operates Airbus Eco-Stars and Bell Long Rangers. (Papillon photo)

regulations strengthened and new caps set on annual air tour operations over the Grand Canyon. No significant progress on further alleviating aircraft noise in the Grand Canyon has been achieved since 1986, claimed McCarthy, when he first got involved. McCarthy helped produce a video of air tour operators over the Grand Canyon to illustrate his concerns over helicopter noise. (Readers can go to youtu.be/SJvCM_ohdnl to view the video.)

The biggest problem to curtailing helicopter noise could be the lack of communication between interested parties. While the NPS and FAA meet occasionally to discuss aircraft operations around and over the Park, there are few meetings between industry, regulators, Native Americans and environmental groups. The Grand Canyon Working Group, which included the Sierra Club and other interested parties, has disbanded.

McCarthy, a mechanical engineer, claimed the air tour industry is not willing to sit down and find a way to curtail the noise in the Grand Canyon. "The industry and the FAA like to talk, but they won't get involved in genuine compromise. All they want is more, more, more," he said. He paused and added



Maverick, Papillon and Sundance Helicopters (an Air Methods company) operate Grand Canyon helicopter air tours out of McCarran Airport in Las Vegas. (Maverick photo)

lightly: "They probably say the same thing about us."

The Helicopter Association International (HAI), which represents the civil helicopter industry, including air tour operators, takes exception to the view that communication between all sides on reducing noise in the Grand Canyon and at other national parks has stopped.

The National Parks Overflight Advisory Group (NPOAG), a congressionally formed advisory body, continues to meet on various helicopter related issues, including noise. The Group is made up of industry representatives, environmentalists, Native Americans and other interested parties. NPOAG will hold a meeting at HAI's 2015 Heli-Expo in Orlando in March. At the conclusion of the meeting, there will be a public comment period during which attendees who are not formal members of the advisory group may have their say.

"The general public is welcome anytime," said HAI President Matt Zuccaro, who sits on the NPOAG. "We want environmentalists and Native Americans and others to know as much about our industry as possible and hear about their concerns because that is how you solve problems."

[AHS and HAI are partnering on a renewed Fly Neighborly/Noise Abatement initiative that will also be announced at Heli-Expo in March. – Ed.]

Operators' View

Mr. Halvorson declined through a spokesperson to be interviewed for this article. However, Las Vegas-based air tour operator, Maverick Helicopters, part of the Maverick Aviation Group, which includes Maverick Airlines and Mustang Helicopters, talked with Vertiflite about its operation and noise abatement efforts.

Maverick, which provides Grand Canyon and Las Vegas strip flights daily, said the biggest contribution to lowering helicopter noise is its commitment to quiet technology rotorcraft. Ten years ago Maverick invested around \$100 million in acquiring a fleet of Airbus Helicopters EC130 Eco-Stars (the Ecureuil) with the Fenestron "fan-fin" tail rotor. In 2003, the company was the launch customer for the EC130 Eco-Star. Since then, the company has grown into the largest operator of EC130s in the world, and in 2012 became a launch customer for the EC130 T2.

The shrouded tail rotor is noticeably quieter than conventional tail rotors, various operators claim. "We deem the EC130 to be the premier air tour helicopter worldwide, due to its size, comfort level and the quiet technology," said Bryan Kroten, vice president of marketing. "We have been told that the Fenestron tail rotor reduces outside noise by up to 50%."

Airbus Helicopters would not back

operators' claim that the EC130 T2 is 50% quieter, but said the noise level for that aircraft is 5.9 dB lower than ICAO's Chapter 8 noise levels. Maverick operates 44 EC130s currently and will be up to 47 by mid-2015. The Fenestron tail rotor is found on other Airbus rotorcraft, such as the AS365 Dauphin and the EC145 T2.

"Las Vegas has the highest level of helicopter traffic in the US," said Kroten. "There are up to 80 helicopters operating in this market at all times." As such, Maverick and other air tour operators must follow strict routes in and out of Las Vegas, which were established by the helicopter operators in conjunction with the Las Vegas Department of Airport Operations and the FAA. Each air tour operator signed a voluntary route standardization agreement. The agreement helps augment safety and allows each company to train its pilots on where to expect the other company's aircraft.

Maverick has quarterly meetings with the McCarran International Airport to discuss any noise or air traffic related issues, said Kroten. It's unknown if Maverick meets with those groups and individuals that would like to reduce helicopter noise and flights over the Grand Canyon: Kroten declined to discuss whether Maverick has met with anti-noise groups on reducing helicopter noise.

Yet the Las Vegas metropolitan area was cited numerous times by FAA's Washington D.C. headquarters on how well the "operators, the community and [McCarran] Airport mitigate noise in areas where it is needed," said Jim Ogletree, assistant chief pilot and safety officer for Maverick.

To reach the Grand Canyon, Maverick's helicopters fly East over Tropicana Avenue out of the City. Once outside the Class B airspace, the helicopter turns southeast to the Hoover Dam. From there, it is a direct flight to the western end of the Grand Canyon, where the helicopter picks up the FAA regulated Green Four Route, which takes it through the western end of the Canyon. Air tour operators are required to maintain 5,000 ft (1.5 km) above mean sea level until it connects to a specified reporting point if they plan to descend to the bottom of the canyon. Maverick's contract with the Hualapai Native American Tribe allows the tour operator to land at the tribe's village at

the base of the Canyon. Passengers may disembark and take photos while there. The helicopter then departs the Canyon and heads back to Las Vegas.

Maverick doesn't fly over the Grand Canyon at night and all of its scheduled air tours are to the Western Rim of the Grand Canyon, said Kroten. Maverick also operates Grand Canyon air tour flights directly from the South Rim.

Despite some regulatory measures, rotary-wing operations are "highly unregulated," states Denver attorney Peter Kirsch, an expert in aviation noise law and regulations. The North Shore Helicopter Route over Long Island, New York is one of a handful of mandatory helicopter routes in the entire country, unlike the mandatory routes for fixed-wing aircraft, which are in the thousands, he said.

Before the Overflight Act, civil helicopters could fly wherever they wanted, said Kirsch. That legislation has been modified and refined. And yet there remains conflict about helicopter noise and operations over the Grand Canyon.

Implementing noise and operating restrictions in the Grand Canyon represents a "classic example of trial and error," said Kirsch. "Some of the regulations have worked, while others have not."

Helicopter noise around the Grand Canyon is an issue Kirsch knows well. His law firm, Kaplan, Kirsch and Rockwell LLP represents Clark County, Nevada, in which McCarran sits. In addition to Maverick, Papillon Grand Canyon Helicopters and Sundance Helicopters also operate Grand Canyon helicopter air tours out of McCarran; a fourth company, Heli USA Airways filed for bankruptcy in 2013.



Blue Hawaiian, an Air Methods company, was started in 1985 with a single four-seat helicopter piloted by company founder, Dave Chevalier. The company operates EC130 Eco-Stars and the smaller AS350 A-Stars. (Blue Hawaiian photo)

Hawaii

Some 2,400 nm (4,400 km) southwest from the Grand Canyon in the sprawling Pacific Ocean sits the eight picturesque Hawaiian Islands, home to Blue Hawaiian Helicopters. The company provides air tours over the islands of Oahu, Maui, Kauai, Molokai and the Big Island of Hawaii, with a fleet of 27 helicopters: 21 EC130s and six AS350 B2 A-Stars.

Blue Hawaiian Helicopters Chairman and CEO Dave Chevalier, is refreshingly candid about how his company has changed its mindset regarding helicopter noise. "It wasn't that we were being obnoxious purposely, we were just ignorant," said Chevalier, who began flying air tours over Maui in 1985.

Numerous complaints plus negative news media coverage during the early

days prompted Chevalier and other air tour operators to form HELO – the Helicopter Environmental Liaison Office. A HELO representative would field noise complaints and pass along the concerns to the operators, which would hopefully deal with the problem.

In addition, HELO would meet with various groups to hear their concerns on Maui. Letting the island residents vent their complaints about helicopter noise, plus implementing changes to the routes, speed and altitude of the offending helicopters helped improve relations between the public and the operators. Chevalier said they've repeated the noise reduction plan on the Big Island of Hawaii and Kauai. It does not have a hotline for Oahu because complaints there have been minimal.

"We really took it seriously and turned it around," remembered Chevalier. "It remains an issue for some today, but it's not on the front page of the paper. It is not a social issue like it was in the mid-to-late 1980s."

Blue Hawaiian also has community outreach program worth noting. "One of the proactive things we do on the islands is to let callers know of operations out of the ordinary that may elicit a complaint," said Chevalier, such as the photo shoot for "Pirates of the Caribbean" movie. "That helps to ameliorate the situation generally."

The complaint lines no longer exist on Maui or Hawaii because the problem has been resolved, said Chevalier.



Air tour operators are permitted by the Hualapai Tribe to land at Grand Canyon West, which is outside of the National Park. (Maverick photo)

Helicopter noise remains an issue on Kauai so that help line remains, he added.

The Haleakalā National Park on Maui and Volcanoes National Park on the Big Island are the main federal parks over which Blue Hawaiian flies. Blue Hawaiian meets occasionally about helicopter noise and operational issues with the superintendent of Volcanoes National Park and rarely with the head of Haleakalā National Park. The air tour operators interact occasionally with the local FAA branch, but not the State of Hawaii, except to obtain tour permits. The operators deal mainly with the various communities on the Islands.

The issue of helicopter noise over communities and national parks and designated wilderness areas is unlikely to be resolved anytime soon. But there appears to be a genuine effort by both sides to engage in meaningful dialogue, even if those conversations don't result in a tangible solution to the helicopter noise problem. The key, said Chevalier, is to maintain communication.

About the Author

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A Q&A With The FAA

Below are answers from FAA personnel to questions *Vertiflite* submitted in writing regarding helicopter noise over national parks, particularly the Grand Canyon.

Q: What has FAA done to reduce aircraft noise in the Grand Canyon?

A: The FAA has been working jointly with the National Park Service (NPS) to address noise from air tour operations, including helicopters. Currently, the agencies are focusing on developing voluntary agreements with commercial air tour operators to address the management issues necessary to protect park resources without compromising aviation safety. In addition, FAA and NPS are working to provide incentives for increased use of "quiet aircraft technology" (QT) at the Grand Canyon.

Q: What is the latest information on noise-related regulations regarding helicopter noise at the Grand Canyon?

A: Since 1996, FAA has adopted a series of rules establishing curfews, operational caps, and air tour routes at Grand Canyon, as well as noise limitations for QT. Most recently, the FAA and NPS published a notice in the Federal Register (on November 10, 2014) outlining a proposed incentive for the use of QT aircraft, including helicopters, at Grand Canyon National Park, which although not a regulatory action itself would provide some seasonal relief from the regulations imposing operational caps. The agencies are reviewing comments received from stakeholders and the public in response to that notice. In addition, FAA is working with NPS on voluntary agreements at other parks. Voluntary agreements are a statutorily-permitted alternative to the establishment by regulation of air tour management plans.

Q: There is some confusion about which federal agency is responsible for setting overflight rules over the Grand Canyon and other national parks. Is it FAA or NPS?

A: The FAA has sole authority to manage and regulate the navigable airspace of the United States. The NPS has made recommendations to the FAA under specific legislative authority governing commercial air tours. The two agencies have worked together in exercising their respective authority to address the effects of aircraft overflights on national parks.

Q: What are the key points of the 1987 Overflights Act?

A: The 1987 Overflights Act included a number of provisions addressing national parks. Section 3 of the Overflights Act specifically applies to noise from aircraft overflights at Grand Canyon National Park. The National Parks Air Tour Management Act of 2000 also addresses air tours in national parks other than Grand Canyon. These Acts have also been subject to amendments.

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