

Airplane Noise on Nantucket

Frequently Asked Questions About The Issue and Possible Solutions

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1. What are the airplane noise trends in Nantucket?

It will come as a surprise to many that, based on decreasing noise complaints and FAA average noise level measurements, airplane noise is a diminishing problem for Nantucket and has been for the last decade. There are a number of reasons but the most significant is the dramatic drop in airport operations. (An operation is either a takeoff or landing.) The operations reached a peak of about 170,000 in the late 1990s and have fallen significantly during the last ten years. For the year ending June 30, 2018, the total airport operations were only 85,700 down 20% from 2017. The decline in private pilots and recreational flying, the shortage of airline transport pilots, the larger passenger capacity of the airliners, and even the advent of frequent and reliable fast ferry service have all had an effect. The implementation of a voluntary “noise abatement program” by the Town of Nantucket many years ago has also helped. An unknown factor is the belief that lodging complaints is futile.

2. What about the noise trends in the Surfside area?

While operations and complaints and average noise levels in the Surfside area have also diminished, Surfside has long been the source of most noise complaints. Surfside residents were responsible for 26% of the island’s complaints at the airport during the last fiscal year and 32% the year before. Its location, adjacent to the operations and activity at Nantucket’s most active runway (runway 6/24) and underlying the generally desired paths of most departing aircraft, makes it vulnerable to aircraft noise. Madaket is a growing source of complaints as well because many arriving and departing aircraft make turns over that area. Fortunately, the vast majority of pilots are well aware of the Town’s voluntary noise abatement program and, usually averse to turning too soon immediately after take-off, tend to climb to at least 500 feet before making any turns. Long time Surfside residents agree that during good weather the vast majority of pilots delay their turns until after reaching the shore line and most remain offshore as they travel westward. This also applies to Cape Air that has the most frequent commuter airline operations out of Nantucket during the summer.

Residents closest to the airport will always be particularly affected by noise, fumes and grime associated with activity on the ramps and aircraft taking off.

3. Why do some pilots fly so low over Surfside?

Pilots flying low over surfside in good weather while landing are either landing on runway 12 or have been told by the tower to make a short approach to runway 6. The few pilots who fly low over Surfside in good weather after taking off from runway 24 are typically either transient pilots ignorant of the noise abatement program and insensitive to the noise problem or pilots who choose to ignore the procedure to save time and fuel. There are no sanctions for violating the noise abatement program, but there is also nothing to stop the Town and other interested parties from sending letters to aircraft owners and operators to remind them of the program.

However, during poor weather (low cloud cover and visibility) pilots are often instructed by the tower to turn to a heading of 270° shortly after takeoff from runway 24. This is at a time when neither the tower controller nor the pilot can see the shoreline to use it as a landmark and when both are willing to ignore the 800 foot minimum turn altitude dictated by the obstacle clearance departure procedure (ODP) issued by the FAA. The low turn instruction is almost invariably caused by the controller's desire to expedite take-offs and landings on busy Friday and Sunday afternoons during the summer. (The faster the pilot turns the faster the next airplane can be cleared to land or take-off). Pilots obey because of a natural desire to cooperate with the instructions of any controller. Such low turns during bad weather appear to account for one-half to two-thirds of Surfside aircraft noise complaints.

4. What can the Town do to control and reduce airplane noise?

The Town owns the airport and maintains and manages it as an enterprise overseen by its appointees on the Airport Commission. The Town also provides fuel, hangar and ramp space. However, the Town has no power or authority to govern operations to and from the airport and flights above Nantucket. Only the Federal Aviation Administration (FAA) has that power.

5. How does the FAA have such power even though the Town owns the airport?

There are two reasons. First, decades ago a U.S. Supreme Court decision held that the federal government has the "preemptive" right to govern movement in the "navigable airspace" above the ground. The FAA's broad exercise of that preemptive right has effectively deprived city and state entities of the power to govern or restrict flights in the airspace above them. Second, the Town has long accepted federal grants to maintain and improve the airport infrastructure including the tower and navigation devices. Whenever an airport accepts such funds, its owner must provide "assurances" among which are guarantees that the airport will remain open 24 hours a day and accept all aircraft that may reasonably be capable of using the airport.

6. What is the Town's noise abatement program?

Although the Town is prohibited from controlling or instituting enforceable rules about flights over Nantucket, it long ago promulgated voluntary procedures applicable to aircraft

operations around Nantucket and to and from the airport. While they are applicable only in good weather conditions and strictly voluntary, they include flight corridors to and from the most active runways at the airport that encourage pilots to fly over areas of open water and the least populated areas of Nantucket as much as possible and to stay at least one mile offshore when heading toward or away from the island. The program cannot be made mandatory because Nantucket air traffic and noise is lower than the threshold that would allow regulatory imposition of limitations on aircraft operations and flight patterns.

Brochures explaining the “Fly Friendly” program are widely distributed and a copy of the brochure is attached. Resident pilots and those who regularly fly to Nantucket are usually aware of the program. The Town even provides an incentive for the commuter airlines to abide by the program in the form of landing fee discounts.

The Town also has an “airport environmental officer” responsible for overseeing the program and responding to residents who wish to lodge noise complaints (508-325-7531) and has an informative airport website that includes an aircraft tracking feature. The website is <http://www.nantucket-ma.gov/597/memorial-airport>. The noise abatement page is <http://www.nantucket-ma.gov/639/noise-abatement-and-flying-friendly>. The Airport Commission estimates the Town spends about \$45,000 annually to support the program.

7. Why can't aircraft take off from the airport in other directions?

All airplanes land and takeoff into the prevailing wind for safety reasons. When the wind is much above 5 knots, the direction of the wind usually dictates which runways are to be used. As the prevailing Nantucket winds are from the Southwest, the vast majority of landings and take offs are to the Southwest using runway 24. When the wind shifts and becomes an easterly or northeasterly, the majority of aircraft land and take-off on runway 6 which is the reciprocal of runway 24. If the wind shifts significantly during the day, the controllers will change the direction of the operations accordingly.

Nantucket has three runways: the main runway, 6,300 feet long, 150 feet wide and oriented northeast and southwest, is known as runway 6/24. (The numbers, with a zero added, correspond to the magnetic direction of the runway being used.) The crosswind runway, 4,500 feet long, 100 feet wide, and oriented northwest and southeast, is known as runway 15/33. The third runway, only 2,700 feet long, a narrow 50 feet wide and oriented west northwest and east southeast, is numbered 12/30.

The main runway, 6/24, is used 88% of the time, and airlines and large business jets can only use that runway. The cross-wind runway is used 11% of the time. The very short runway, restricted to small aircraft and not the choice of most pilots, is used only about 1% of the time. It is primarily used as a taxiway. More large air carrier commercial service has dictated dominant 6/24 use.

8. If the FAA tower controllers actually control aircraft operations to and from Nantucket, why can't they prevent low turns over Surfside?

That is a logical question with a complicated answer. The term controller is quite misleading. The FAA controllers in the Nantucket Tower, like those in the towers of small communities throughout the United States, are allowed to exercise only limited control over what pilots do. First, their jurisdiction is restricted to a standard hockey-puck shaped piece of airspace 10 miles in diameter and 2,500 feet high centered over the airport known as Class D airspace. The perimeter of this disc reaches Cisco Beach and Dionis Beach to the West, 5th (Bass) point on Coatue and Quidnet to the North and to 'Sconset to the East.

Pilots landing at Nantucket often contact the tower when they are as far as 10 to 15 miles away. But there is no communication requirement if the pilot never enters the Class D airspace over the airport. Second, the controllers are tower controllers and not radar controllers and have no authority to direct in detail the direction and altitude pilots must fly. Their power is limited to keeping aircraft separated, primarily those approaching and departing Nantucket. Neither the controllers nor regulations can prevent a pilot from completely ignoring Nantucket's voluntary noise abatement program. Finally, the Nantucket Tower is closed between 10:00 p.m. and 6:00 a.m.

9. Why can't or won't the FAA adopt and impose stricter flight rules, mandatory corridors and give the Nantucket controllers more power?

The FAA takes such action only at airports where operations and noise levels far exceed those at Nantucket and where the surrounding population is far larger and denser. Boston, New York and Philadelphia are examples. Those airports are covered by huge wedding-cake shaped bubbles of airspace 7000 feet high and 40 miles in diameter at the top called Class B airspace. The controllers have positive control over all aircraft within the airspace and approach and departure corridors have been established after hearings and extensive environmental impact studies. Class C airspace exists, too, but that is just a bubble of airspace slightly larger than but similar to Class D, that overlies airports such as Bradley and Providence.

10. Are there any regulations that govern how high pilots must fly?

Yes. The Federal Aviation Regulations require that pilots of aircraft, except helicopters, fly at least 1,000 feet above populated areas such as the noise sensitive areas in Nantucket "except when necessary for take-off or landing." Pilots actually prefer to cruise above that altitude for reasons of safety, ease of navigation and communications. But the operative words are "except when necessary for take-off or landing." The vast majority of aircraft flying over Nantucket are either in the process of landing at Nantucket or taking off.

11. Whom should I contact when I believe an airplane has flown too low over Surfside?

You may contact the Airport's environmental office. (508-325-7531). The online complaint form is preferred. (<https://veoci.com/veoci/p/form/nrf6yey5dhw4#tab=entryform>). The Airport's system tracks all aircraft and if given enough information, the office can identify them with certainty. Of course that places the burden on the caller to provide a good description of the airplane including color, number of engines, high or low wing and all or a part of the registration ["N"] number that can be seen. The precise time, location and flight direction are important, too. Timely reference to the tracking portal in the airport website can be quite helpful in the process.

Those who report low flying aircraft should keep their expectations low. It is highly likely a low flying pilot is in the process of landing or taking off and may have even been "told to do so by the tower." Those are legally permissible reasons for the low flying.

If the pilot was clearly "buzzing" the area of Surfside Beach, you should also contact the FAA's Flight Standards District Office in Burlington, Massachusetts (781-238-7500). That FAA facility is responsible for investigating violations of the Federal aviation regulations in the Nantucket area and initiating enforcement proceedings. Do not call the local tower. The controllers there are not responsible for investigating low flights. Remember too, such calls can actually interfere with the controllers' primary job of keeping aircraft safely separated.

12. How can Nantucket's airport function when its tower is closed?

Only ten percent (10%) of the 5,000 public use airports in the U.S. has a control tower so most pilots are more accustomed to flying into airports without towers than those with towers. The weather is automatically measured and broadcasted at many towerless airports and pilots can operate the approach, runway and taxiway lights with a few clicks of their microphone button. At towerless airports pilots keep track of each other by announcing their position, altitude and intentions on a common frequency used at the airport. If the assistance of a radar controller is needed because of bad weather, pilots communicate with radar controllers on the mainland.

13. Do aircraft engines have mufflers or should they?

None of the typical small airplanes flying in the U.S. are required by the FAA to have mufflers. The good news is that the noisiest single engine airplanes such as the Cessna 210 and twin engine airplanes such as the Cessna 337 and Beech Starship, are no longer made. Furthermore, the public has demanded quieter engines of business jets and airliners flying in and out of major airports and the engine manufacturers have responded quite effectively. The FAA also permits airports to ban jets with older engines such as the first generation LearJets.

14. Why not enlist the help of our state officials and U.S. representatives and senators to change the laws applicable to Nantucket and the airport?

Meaningful help is not likely. Because of the federal preemption principle, local and state officials and entities are powerless to do much about the federal laws and regulations. Congressman and Senators, particularly those with significant tenure, are very wary about wading into the airplane noise fray. Most likely they have battle scars from airport noise controversies and learned the hard way that airplane noise is a necessary evil in our society and taking any steps to help one community will probably shift the noise burden to another community also within their constituency. Airport opponents are often pejoratively called NIMBYs: They recognize that airplanes and airports are necessary but they don't think they should be anywhere near their own backyard. All too often their suggested solutions would simply move the problem to another community.

15. How can I learn more about the Nantucket aircraft noise issue?

The Airport's Environmental Office (508-325-7531) is a good source of information as is the Town's robust airport website that includes an aircraft tracking portal subject to a 10 minute security delay. (www.nantucketmemorialairport.com). As noted before, an easier way to get to the portal is <http://www.nantucket-ma.gov/597/memorial-airport>, then go to the Noise Abatement Page. It also provides links that allow you to use Flight Aware that provides the type, speed, altitude and owners of aircraft and to access an "app" to monitor pilot/controller communications. The tracking portal is most interesting and informative and helps one understand how the usual flow of air traffic is kept away from populated areas. (Beware, it can take great patience to locate the tracking portal). The website also includes a copy of the 48 page Power Point presentation made by Noah J. Karberg to the Wigwam Community in August, 2014 that provides more detail about the noise control challenges.

SOURCES: Interviews of Patrick M. Topham, manager of the FAA's air traffic control tower, and Thomas M. Rafter and Noah J. Karberg, manager and assistant manager, respectively, of the Nantucket Memorial Airport. The assistant airport manager also serves as the airport environmental officer. The airport website and Mr. Karberg's presentation have also been consulted.

***CREDENTIALS AND DISCLOSURES:** Paul Heintz and his wife, Jane, have been Nantucket summer visitors since the 1960s and have owned a home in Surfside for over 30 years. Paul, a pilot for over 60 years with 4,400 hours, has flown into Nantucket for 50 of those years. He is rated as an airline transport pilot and instrument instructor and, until recently, he owned a Cessna 210. He served on the board of the 300,000 member Aircraft Owners and Pilots Association for 40 years. Paul is a Philadelphia lawyer whose areas of concentration include aviation law. One of his 4 children, Robert, an FAA air traffic controller at Boston's Logan Airport, served in the Nantucket Tower for 15 years.