

## Traffic Impact of Safer Approaches at Chatham Airport

**If we allow aircraft to land in poorer weather conditions wouldn't that mean that more large airplanes/charter operators will land in Chatham than before?**

Some concerned citizens have expressed the concern that new proposed straight in approaches would cause an increase in traffic by larger aircraft. Depending on which approach is finally approved by the FAA, the new approaches might allow aircraft to land when the bottoms of the clouds are as low as 300\* feet, whereas the current circling approach is only approved for when the cloud bottoms are at 600 feet or higher.

What this means is that there are times when aircraft have to either divert to other airports or avoid a trip altogether depending on weather conditions. So, there are 3 cases to consider:

1. The weather is clear, or cloudy with the clouds at 600 feet or higher.
2. The weather is cloudy with clouds lower than 600 feet but higher than 300 feet
3. The weather is cloudy and/or foggy and clouds/fog are lower than 300 feet

To determine how frequently each of the above cases occur, National Weather Service data for the entire calendar year 2019 were analyzed. Hourly data recorded by the Automated Surface Observation System (ASOS) at Chatham Airport were used, generating 24x365, or 8760 data points.

For case 1, there are 7447 occurrences or 84% of the time.

For case 2, there are 831 occurrences or 9% of the time.

For case 3, there are 482 occurrences or 6% of the time.

From this information, it is reasonable to conclude that the new approaches would allow aircraft to land 93% of the time, versus 84% of the time today. This could then lead to  $93/84 = 11\%$  more landings. However, the low clouds are more prevalent in the evening and nighttime hours, when there is much less traffic anyway. This would indicate that the actual % increase is lower.

Charter aircraft are almost always manned by a captain and first officer, both of whom are certified for operation in instrument conditions, making them much safer than single pilot operations. So, if these operators were landing uniformly around the clock, then one might expect 11% additional traffic. In reality, most operations are conducted during daytime hours when conditions are better than average, which once again would make the increase less than 11%.

Over the last six years, the number of Charter operations have averaged approximately 200. So, if there were an additional 11% caused by the new

approaches, that would mean an additional 22 flights. If we average this number over 12 months, that would be an extra 2 landings per month. Even if we average this over only 6 months due to seasonality, there would still be less than one additional charter aircraft per week.

**What about the possibility that the new approaches would entice additional charter operators to offer Chatham as a destination?**

Investigation into Charter Operators business practices indicate that the destinations are not chosen by the Charter Operators but rather the customers themselves. Then the operator will fly the customer to his/her requested destination purely based on the aircraft in the fleet and their operational limitations, i.e. runway length requirements. So, for example, the Charter Operator “Wheels Up” will not fly into Chatham (but only to Hyannis) because the smallest aircraft in their fleet, a King Air 350, requires a 3300-foot runway. Changing the approaches at CQX will have no impact on this situation. The Operator PlaneSense has Pilatus PC12 aircraft which are capable of operating in and out of a runway only 2400 feet in length.

**The evidence thus indicates that the proposed approaches, while increasing safety and reducing noise, have only a minimal impact on charter operations.**

\*Technically, the FAA has some LPV approaches down to 200 feet above ground level; however, this minimum would not apply in Chatham due to the runway length at Chatham. The lowest decision altitude for Chatham would be 350 or 400 feet.