



AVIATION ACTIVITIES UPDATE

January 12, 2021

FAA Provides Report to Congress on Airport Noise Mitigation and Safety Study

On December 23, 2020, the Federal Aviation Administration [submitted a report](#) to Congress summarizing research related to airport noise mitigation. The study resulted from Section 179 of the FAA Reauthorization Act of 2018 which required the FAA to determine whether a decrease in jet aircraft approach or takeoff speeds results in significant aircraft noise reductions for communities surrounding airports. The Massachusetts Institute of Technology's (MIT) International Center for Air Transportation conducted the study. The following is a summary of the report.

The study identifies two major noise sources from jet aircraft: engine noise and airframe noise. Engine noise includes the fan, core, and jet. Airframe noise sources include the flaps, landing gear, slats and trailing edge which generate noise when those items are deployed, causing air to flow over the components and generate noise. The report explains that engine noise dominates during jet aircraft takeoffs due to the relatively high-power settings and the difference between the high velocity jet airflow and the speed of the aircraft.

For the departures section of the study, MIT evaluated two scenarios:

- 1) Changing the location where acceleration and flap retraction begin in the Noise Abatement Departure Profiles (NADPs), and
- 2) Reducing the climb speed to maintain the aircraft at the minimum safe airspeed with flaps up until 10,000 feet in altitude.

Researchers used NASA's Aircraft Noise Prediction Program (ANOPP), to evaluate the first concept through modeling the Close-In (NADP-1) and Distant (NADP-2) Noise Abatement Departure Profiles. They evaluated the second concept through modeling reduced climb speed.

The report indicates that airframe noise sources are highly sensitive to aircraft speed and speed is closely linked to the deployment of flaps, slats and landing gear. At slower speeds, high-lift devices are deployed to reduce stall speed, which then increases airframe noise levels.

For arrivals, MIT evaluated a delayed deceleration approach (DDA) concept with NASA's ANOPP. Deceleration of the aircraft is delayed through the deployment of flaps and slats later in flight to allow the aircraft to operate at low thrust to reduce both airframe and engine noise.

The report showed reduced noise 10 to 25 miles out from the runway; and less fuel burn resulting from reduced flight times and lower thrust settings on the engines using a delayed deceleration approach. The report also discussed potential implementation issues associated with DDA. Specifically, that the deceleration profile would vary by aircraft type, weight and weather; and varying deceleration rates may pose a challenge to air traffic control in terms of aircraft sequencing and spacing for arrivals. More research and analysis is needed.

In summary, the study found that:

- For departures, changes in aircraft climb speed do not significantly affect the overall aircraft takeoff noise due to the dominance of engine noise.
- For arrivals, delaying the deceleration of the aircraft on approach could reduce noise between 4 and 8 dB (a noticeable level) 10 to 25 miles from touch down, but additional work is needed to validate the potential noise benefit and resolve implementation challenges.

Aviation Committee Activities

The next Aviation Committee meeting will be held on Monday, January 25, at 5:30 p.m. The meeting will largely focus on the Committee's selection of its workload priorities for 2021. Community members are welcome to participate in the virtual meeting. You may also submit any suggestions for committee priorities via email in advance of the meeting to tfinnigan@newportbeachca.gov. Please submit suggestions no later than Monday, January 18 at 5 p.m. Suggestions may also be made during the Public Comments section of the meeting.

Since the Committee's December 7 meeting, the Technical / Departures Ad Hoc met to review its work toward the Committee's 2020 priorities and to discuss possible priorities to recommend to the full Aviation Committee when it chooses its 2021 focus areas. The recommendations will be submitted for the Committee's consideration.

The Government Relations Ad Hoc has also met to brainstorm priorities for the Aviation Committee to consider and to help update the City's airport/aviation government relations strategy. When completed, the proposed updates will be brought to the full Committee for review and approval.

January 12 City Council Meeting

[The City Council's January 12 agenda](#) has two items that may be of interest to you. Item 7 pertains to a proposed agreement with the lobbying firm Carpi & Clay, Inc. for federal advocacy services. If Council approves the agreement, the consultants would primarily focus on assisting the City with its harbor dredging and aviation-related efforts. Item 9 pertains to the Mayor's annual appointments, which the City Council must confirm before they are finalized. Mayor Avery desires to appoint Council Member Diane Dixon as Chair, and Council Member Noah Blom as Vice Chair, of the Aviation Committee.

Highlights of Related Federal Activities

The Environmental Protection Agency (EPA) issued a [final rule](#) that sets greenhouse gas (GHG) emission standards for certain new commercial airplanes. The standards match the international airplane carbon dioxide standards adopted by the International Civil Aviation Organization in 2017.

In late December, Congress passed and the President later signed a package that includes an omnibus appropriations bill and COVID-19 Relief bill. The latter includes \$16 billion for air carriers and \$2 billion for airports and airport concessions. The package also included the [Aircraft Certification, Safety, and Accountability Act](#), bipartisan legislation developed in response to issues concerning the Boeing 737 MAX.

January 12 Orange County Board of Supervisors Meeting

As you will recall, during the lease negotiations for the General Aviation Improvement Program, the proposals from the Fixed Based Operators provided that they would not operate regularly scheduled commercial flights from the FBOs. In accordance with Council Policy No. A-17, the City reviewed the proposals and determined that the FBOs' proposals were consistent with the City's goals for a lessee at these sites. The County and FBOs agreed to lease provisions documenting the agreement to not have regularly commercially scheduled flights at the FBO sites.

At its January 12 meeting, the County Board of Supervisors will consider a [supplemental agenda item](#) that, if approved, would eliminate the lease provision limiting the operation of regularly scheduled commercial flights from the FBOs. Regardless of the Board's decision, the City has no reason to believe the FBOs have plans to change their business models and schedule commercial flights from their facilities.