



South Metro Airport Action Council

10 April 2013

Representative Keith Ellison
1122 Longworth Building
Washington, D.C. 20515-2305

Dear Keith,

So far, thirty months of joint communications with FAA have produced no results of note.

The FAA misled you by repeating that fleet mix rather than operational procedures led to increased overflight complaints. The purpose may have been to distract you about how the budget and sequester limitations will play out at MSP. **You need know the status of and schedule for the regional airline safety program and for the air traffic control system changes at MSP.** As things are, best case, there is more risk, cost, and noise compared with 2010, without economic benefit. Worst cases, more health risks and high air transportation costs for your constituents; or, God forbid, a crash.

As we have said repeatedly, the change in flight patterns *caused* more noise exposure as more aircraft slowed their ascent by turning off the runway heading sooner and passing lower over neighborhoods in South Minneapolis. Our EA/EAW comments included that lower rates – longer intervals between operations – is a reasonable alternative that would more safely accomplish the same goals at less cost and environmental impact per 40 CFR 1502.14(a). The FAA Record of Decision does not mention any consideration of this comment.

FAA is refusing to fully inform you or the public about the FAA's capability to manage health and safety risks at MSP. The ongoing budget crisis currently limits air traffic control operations around busy airports. But FAA will not discuss the schedule for necessary improvements at MSP:

- More precise routes departing MSP can be imagined using Performance-Based Navigation (PBN), but not all aircraft using MSP meet the required navigation capability standard, including properly trained aircrew;
- *En route* guidance could either limit arrival rates and maintain safe separations and intervals or maintain peak arrival rates and *increase airspace management problems*. Budget cuts in ATCT staffing and system updates and training will lead to delays, according to FAA. The MSP plan should reschedule flights to reduce arrival rates rather than deal with the delays and risks caused by congestion;
- The proposal to use PBN departures from MSP to simultaneously maintain operational rates increases noise exposure generally. [See the attached note.]

The FAA says safe operations are possible with less than 30 seconds between successive runway operations, such as a R30R departure followed by a R30R arrival. **This is FAA's ballgame and it will apparently take stronger action by our Congressional delegation to address safety and noise issues at MSP.**

The FAA accepted your invitation to discuss the September 2010 near-mid-air-collision at the SMAAC Forum December 9, 2010. The NTSB reported that the MSP ATCT erred, due to one controller being distracted by a ground-traffic issue. In September 2010, daily traffic was low, about the same as before Runway 17-35 was opened.

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Mr. Rydeen acknowledged the MSP controller's mistake, but would not answer questions about staffing or why nearly simultaneous take-offs were needed or allowed on the parallel runways at the time. He did say that the unusual left turns were supposed to be coordinated by two controllers, but weren't. Departure procedures were changed, in late 2010, Rydeen said, to reduce "air crossings" by assigning 360 degree departure headings off R30R.

Mr. Rydeen then spent over an hour defending the FAA's *Efficiency Policy*. He minimized the procedural changes "reducing air crossings," and did not "speculate" on how ground traffic might be affected as daily flights increased during the economic recovery.

During 2011, some flights were added and others moved around at peak-hours at the MSP hub. As runway use patterns changed, thousands of citizen complaints were made about the R30R departure turns. Citizens observed more frequent overflights, many at low altitudes, in the Standish-Ericsson and adjacent neighborhoods. Although SMAAC tracked flights and complaints and *concluded that the procedural changes were the main cause*, the MAC stated that the changes did not increase average annual airport noise (as much as 1.5 DNL, that is <15 times more acoustic power) and the flights were not over new territory with >60 DNL average annual noise exposure.

NADP compliance for the period analyzed was not reported. MAC did not re-draw the 70 DNL contours, and assumed all lift-offs were still near the ends of the parallel runways with average rates of climb. In spite of increasing use of runways for departures based on destination and a changing fleet mix, this inadequate analysis was used to prepare a staff report to the NOC (February 2012) that there was no significant noise impact in the \$1 billion planned 2020 expansion serving larger Delta/Sky Team banks.

The EA/EAW noise findings inappropriately preceded the ongoing operational changes. In spite of controversy and more changes in flight patterns by the MSP ATCT -- actually an earlier discussion item on the NOC agenda at the meeting -- this recommendation was passed on in the MSP 2020 Capital Improvements Draft EA/EAW.

SMAAC and others commented on the inadequacy of the Draft EA/EAW and expected that the FAA review would be an open process per FAA Order 1050, including a Public Hearing and a finding based in the record. MAC announced a date for the FAA Hearing, and a postponement of the date. FAA and EPA never held a public hearing and issued a FONSI *without evidence that the claims of fact and law in our formal comments were investigated.*

Minneapolis Council Members John Quincy and Sandy Colvin-Roy met with Mr. Rydeen in Autumn 2011. Mr. Rydeen agreed to modify the R30R departure headings so that turning overflights were divided along three headings to reduce overflight complaints. These procedural changes and departure headings allow operations that do not attempt to comply with the NADP. Minneapolis' request to reinstate the near-favoring NADP or a special profile was not considered. SMAAC told you that "efficiency" (keeping high hourly rates) was the purpose of the procedural changes, but *operational risks at peak hours at MSP are probably elevated compared to 2004-05 when daily operations were 30% higher at MSP.*

We now are aware of altitude-by-block data based on FAA tracks. Michael Kehoe created a graphic "departure profile." based on this data. Mr. Quincy is attempting to discuss the altitude data with MAC and NOC. MAC and NOC at most could do what they already refused to do, *ask FAA to please approve a runway 30R/L NADP and enforce it.* There is no evidence that the altitude-by-block data was used in the FAA/EPA review of the EA/EAW. It is at least unfair and inappropriate for FAA to release a Finding of No Significant Impact without a meaning record and in the presence of ongoing ATC changes. Even if the PBN routes or other ATC improvements are adopted, the 2011-12 step change in per flight noise and noise exposure would be ignored.

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Flight data for all of FY 2011 and 2012 and additional information about gate and runway use was available when SMAAC and your staff asked FAA in October 2012 to review the analysis considering actual turning tracks and the attained altitudes. FAA refused, but cited the original analysis, now belied by FAA track data.

FAA is not in favor of a Noise-Abating Departure Profile. The proposal for a set of Performance-Based Navigation routes is not mutually exclusive of an NADP, but the two established NADP's are based on flying straight out the runway heading following the profile (heights, periods of controlled rates of climb) for 3.5 miles from the starting end of the runway. In other words, the existing NADP limits turns, but *the turns are made for efficiency: to maximize runway use rates.*

At MSP, there is *no economic goal or need for runway use rates over 40 operations per hour.* Hub rates arise from connecting schedules and available gates; high rates serve the hub airline and connecting passengers. The economic need for passenger capacity forecast for 2020 — the basis for MSP Expansion in 1998-2004 — was expressed as a maximum flight capacity of 1,600 operations per hour, or an average hourly rate between 30 and 40 operations per hour per runway.

Operations at an airport peak of 120 to 130 operations per hour is more than enough; less costly to implement using GPS navigation aids, PBN or Next Gen over the next decade; safer; and, produces demonstratively less noise and noise exposure. Moreover, it is likely that an appropriate model based on actual fleet mix and attained altitudes, a near-favoring NADP, and average rates of 30 to 32 operations per hour per runway would show the noise reduction.

Thank you, and your staff, for your ongoing concern for neighborhoods, air travelers, aviation employees, and economic recovery. SMAAC will provide information and support whenever needed. Please advise us of the FAA reply.

Cordially,

FOR THE BOARD OF DIRECTORS

James R. Spensley

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South Metro Airport Action Council
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CC: Senator Al Franken
Rep. Betty McCollum
Rep. Tim Walz
State Senator Scott Dibble
Council Member John Quincy
MSP Noise Oversight Committee

Senator Amy Klobuchar
Rep. Rick Nolan

State Representative Frank Hornstein
Council member Sandy Colvin-Roy
Metropolitan Airports Commission

**Technical Note: Noise Impacts of
Proposed RNAV/PBN Routes at MSP**

Released February 2013, Revised April 2013

Some areas near the airport would be greatly impacted by the FAA-proposed "more precisely followed" routes because they are presently not over-flown at low altitudes. Under the PBN tracks closer to the runways, climb rates would be limited by turns. Turns prevent more rapid ascents, and departure profiles would vary depending on fleet mix, runway by runway as well as winds and other factors.

SMAAC is trying to address the situation locally without much success, but we hope FAA would consider a lower peak rate ceiling at least as an environmental assessment comparison option. The current EA may -- for lack of believable airline demand forecasts -- result in a "no action" plan, but the current operational baseline MSP model still does not include the noise and pollution increase experienced during 2011 in Standish-Ericsson and adjacent neighborhoods and other routes have not been studied for actual noise impacts.

The Integrated Noise Model (INM) obscures day-by-day, flight-by-flight, differences. Many departures however would be over 110 db events (70+ldn) near the airport boundary and well over FAA compatible use standards. Intensity values are averaged by day, so if there are not a lot of different tracks, close-in neighborhoods would *be* in a non-compatible use area but not necessarily *modeled* as such.

Using event noise metrics and actual altitude, noise exposure areas would be increased, and the overall noise-exposure impact would depend on flights per day per track. Routes that overfly less-populated industrial corridors and river valleys reduce noise exposure per flight. The main purpose of PBN tracks, however, is *to aid air traffic control at high rates and minimal separations*¹. Daily use of these less impactful routes depends on *when flights are scheduled*, e.g. peak hour rate, as well as how many flights use MSP daily.

A wrong assumption, that noise exposure will be worse directly under any PBN route, caused a public outcry and NOC was not willing to endorse the FAA proposal. The assumption is reasonable, but not correct. There are two explanations:

1. Using the INM, more flights would be modeled along some PBN tracks and fewer along the circa 2003 modeled tracks. DNL is heavily weighted by flights per day per track. The INM, unless an exception is negotiated, uses the source noise table and average climb rate for every path.
2. Noise is a pressure wave, and loudness (Intensity) is proportional to the pressure (using a log scale if expressed in decibels). The pressure wave travels in every direction at the speed of sound, with the sound level decreasing by the surface area of the sphere, that is proportional to the cube of the distance the wave has traveled. Consider the diameter (about 1,000 feet) of the circle formed by the intersection of the noise sphere originating from an airplane 2,000 feet overhead. The noise intensity is the same anywhere in the circle. In other words "directly under" a flight is not a line but an area of many blocks. The width of the area as mapped for a flight depends on the altitude along the track.

1. Make no mistake, FAA is pressured by airlines to maintain high rates, and Mr. Rydeen did not consider lower rates when reacting to the near-mid-air collision. The NTSB investigation noted that a previous rate-increasing exception ("independent" use of the parallel runways) led to the September 2010 situation: during simultaneous take-offs, the controller directing the cargo plane on the left-hand runway did not order a turn.