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**MSP 2020 Capital Improvements
Draft EA/EAW Comments**

INTRODUCTION: The *South Metro Airport Action Council* (SMAAC) is a citizens' association founded over 40 years ago to address noise and pollution from air and ground operations at MSP (Minneapolis-St. Paul International Airport). The organization has alternately clashed and collaborated with the Metropolitan Airports Commission (MAC) over the years, accumulating unique knowledge and expertise, observing plans and management, *and seeking safe, sufficient, affordable, and clean operations at MSP.*

The EA/EAW is less an environmental assessment and more a plan to *expand MSP as a hub airport.* The long-term plan to increase use of MSP principally as a hub drives the MSP Capital Improvements Plans year by year. However, MSP's small size and urban setting impose considerable limitations. Chief among these are air and ground safety and proximity to neighborhoods, schools, and other incompatible land use.

The airports commission, its staff, and its consulting engineers assert that the planned capital improvements, all three alternatives, *would cause no significant environmental impacts at all.* Our view is that operations, airlines, and circumstances are in such a state of flux and controversy that proceeding to increase operations as planned without an Environmental Impact Statement (EIS) is improper.

The MSP airspace management plan maximizes runway use rates, up to 160 operations per hour at peak hours. Alternatives 1 and 2 extend peak hours by adding gates. To maintain any level of service for the airlines and for passengers, the airport and the Federal government must provide redundant facilities. MSP hourly flight capacity was increased 80% by the new runway and higher hourly rates, supporting a larger Northwest Airlines hub, but at a high cost and without sufficient local access and ground services.

While no Metropolitan Minnesota economic situation imaginable *needs* 1.4 million annual operations at MSP, but the capital investment is the same for even a few hours per day at 155+ operations per hour. A safer, less expensive, less noisy and less polluting MSP is possible by limiting hourly rates and schedules.

As we have seen, high rates are risky. This situation presents two huge problems: as acknowledged in the MSP 2030 LTCP, very expensive groundside improvements are needed for safe movement of aircraft. The LTCP associates this need with *annual flight operations*, but the need is the same now (2012), 5 to 6 hours daily at peak hours, as then (after 2025 as forecasted).

The MAC has not acknowledged the risks of serious environmental impacts in expanding operations or during construction, although serious failures and accidents have occurred at MSP.

EXECUTIVE SUMMARY

Three main points are made supporting SMAAC's recommendation to the FAA to either order an Environmental Impact Statement (EIS) or return the Draft Environmental Assessment (EA) to the Sponsor as incomplete. In the interim, related capital improvements should be suspended, and rates and schedules should be reduced due to the overflights controversy, uncertainties in use and demand forecasts, and unscheduled completion of the mandated regional airline safety programs.

1. ENVIRONMENTAL IMPACTS NOT QUANTIFIED OR DISTINGUISHED

The Draft EA/EAW fails to differentiate noise or other environmental impacts among the three Alternatives. **There is no discussion of reasonable alternatives that accomplish the same goals at less cost and equal or less environmental impact as required by 40 CFR 1502.14(a).**

FAA Order 1050-1E, with respect to the preferred Alternative, **requires** an EIS because runway use and noise exposure is highly controversial (/501b4) and impacts *including mitigation*¹ remain significant (/500c). Also, children are harmed by overflights and schools are near the 70 DNL limit where mitigation is inadequate (FAA Order 1050-1E/400c), and *revised* departure procedures routinely route air traffic over noise sensitive areas (/400n).

Noise exposure increases resulting from changes in departure procedures and runway use that began in late 2010 are unresolved. Additional changes by the airlines in 2011 and the FAA in 2012 were applied to all three Alternatives, obscuring significant local noise increases compared to 2010 before the departure changes. As of September 2012, no flight path or noise intensity data is available for a full year, and additional changes are being considered.

The risks of fuel leaks, storm water management failures and deicing fluid escapes and overflows should be quantified and funds identified for emergencies and containment. Problems occurred in these systems in operation and during past expansion projects. The full cost of new facilities and their maintenance and repair is uncertain but proportional to the hub aircraft bank and extended peak operational periods.

2. SAFETY NEEDS AND IMPROVEMENT SCHEDULES NOT SYNCHRONIZED

The Sponsor reports that "...facilities are congested.... (and, the use of) gates ... exceeds capacity during peak winter periods." This congestion exists because of fleet mix and runway overuse at peak hours routinely in any season. Airline plans *may* include up-sizing the hub bank passenger capacity per flight, but since peak hour rates would be continued at minimum FAA separations, runway use would be no less complicated and ground congestion continued. Alternative 2 would exacerbate both.

¹ The possible future mitigation described includes treatment of residences, schools, and medical facilities in 64-60 DNL areas without identifying the authority or funding for the mitigation program(s).

Noise-impacted neighborhoods were told that increased overflights were the result of an FAA procedural change made for *safety*. However, turning flights also increased because of runway and gate use realignments, raising questions about ground traffic congestion and ground safety needs. Congestion is due to the airspace management plan and “efficient” use of three runways, two with interspersed arrivals and departures. Congestion is due to the airspace management plan and “efficient” use of three runways, two with interspersed arrivals and departures.

Daily operations, daily departures using R30R/L and aircraft gauge are much changed since 2010 (or since 2005, after the new runway opened, or since 2002, when MSP use was down 20 to 25% due to 9/11).

The taxiway bridges planned for construction after 2025 are needed for 150+ safe operations per hour now. More annual operations may or may not increase peak hours per day but would neither increase or decrease peak-hour runway use or ground traffic congestion.

3. THE HEALTH STUDIES: HARM FROM OVERFLIGHT EVENTS

The Federal Inter-Agency Committee on Airport Noise (FICAN) is exploring how airport operations produce event-noise *correlated with very serious public health risks*. Many industrialized countries use event noise limits to plan or regulate airport and airline operations. *Perhaps* the MAC planning horizon for this potential change is, unfortunately for the neighborhoods, after 2020. **But by 2030 it is reasonable to assume these risks will rightfully limit expansion of all urban airports, including MSP.**

The EA/EAW is closely related to the MSP 2030 LTCP, and *the health studies are a fact that should be mentioned now*. The Sponsor is well aware of the FICAN/Partner research and the hundreds of epidemiological studies. The MSP Noise Oversight Committee is following the FICAN work and requested that a local epidemiological study around MSP -- or in Minneapolis where an extensive 5 db sound insulation program and a supplemental program are adjacent to untreated areas near MSP.

Even the No Action alternative would increase overflights and unreasonably denies the ongoing controversy over rates and departure procedures.

DISCUSSION:

1. NOISE EXPOSURE NOT QUANTIFIED OR DISTINGUISHED

During 2011, the MAC received thousands of disturbance complaints from neighborhoods newly subjected to overflights and from neighborhoods observing more overflights at apparent lower altitudes. This followed a procedural change made to more safely manage air traffic control during simultaneous or nearly simultaneous use of both of the parallel runways.

As a result, the MAC delayed issuance of the EA/EAW until FAA and airport staff "investigated." The FAA subsequently revised flight paths slightly. Either an increase in daily flights or moving airlines as in Alternative 2 would change overflight and noise patterns, **but not necessarily in the same way.**

At the MAC and NOC, noise complaints related to the operational changes and questions related to health studies were separated from the capital improvements and EA/EAW. MAC staff resisted citizens' attempts to discuss the health studies, which strongly suggest that **event noise** is a better measure of noise exposure impacts.

SMAAC correspondence and appearances and City of Minneapolis requests of the NOC are unmentioned in the EA/EAW. Since the Draft EA/EAW was released after the NOC asked FICAN to consider using MSP as an epidemiological test study site, it is strange that this controversy is not addressed in the Draft EA/EAW, considering the time frame is 2020 implementation and further operational expansion is planned through 2030.

Noise exposure increases resulting from increased use of R30R by aircraft departing on a 360 degree heading during 2011 or on 300, 320, 340, and 360 degree headings this year have not been fully or finally determined, Runway use data for a full base year is needed for the Integrated Noise Model (INM) to model "actual" noise resulting from base-year average daily operations. Otherwise, local areas are assigned, for example, only part of the noise from actual overflights, normalized altitude, air speed and source noise. In the case above, departure overflights were increased from less than <1% of all departures (<6 per day) to >15% (>185 per day).

Airline plans may include more hub bank passenger capacity per flight, but since peak hour rates would be continued at minimum FAA separations, it appears that noise exposure would still be increased and that runway use system percentage goals would be even more unrealistic. Noise exposure increases resulting from increased use of R30R by aircraft departing on a 360 degree heading during 2011 or on 300, 320, 340, and 360 degree headings this year have not been fully or finally determined, and runway use data for a full year is needed for the Integrated Noise Model (INM).

Daily operations, daily departures using R30R/L, and aircraft gauge are much changed since 2010. Delta Airlines has announced aircraft purchase and flight realignment plans² not taken into account.

² Alternatives 1 and 2 include gate-by-aircraft-type improvements that would be incorrect if Delta Airlines reduced regional jet flights and added MD-90 flights.

The EA/EAW noise "analysis" is way off:

1. **Comparing the same (new) flight patterns provided no difference among the alternatives.**
2. The projected NEMs are not drawn at a scale that allows anyone to see where the "old" contours lay.
3. The aircraft source noise and altitude values were not based on actual noise.
4. The base year is unspecified, but no full year since 2009 is typical due to continuous flight-path changes since October 2010, increasing R30R/L departures, and seasonal changes in runway availability, wind, and flight schedules.
5. The new headings and runway use make average tracks north of MSP both lower (louder) and further east than modeled for the EA and compared to 2009. **There is no doubt, really, that there is new and more noise exposure in Minneapolis.**
6. The 1.5 DNL at a 65 DNL contour "significance" standard is: a) one of several standards (1.5 DNL is 2.5% at 60 DNL; 2.3% at 65; 2.1% at 70). Any increase in 70 DNL areas would be incompatible land use.
7. The best case error margin in MSP NEMs is no less than 0.5 DNL³. The graphics program smoothes the curve as it connects the weighted grid points

The assertion that these flight pattern changes did not, have not, or will not exceed an increase of 1.5 DNL at the 65 DNL contour (Chapter 5, Aircraft Noise, page 5.2) is misleading and incomplete:

- **The standard also applies to DNL levels greater than 65 DNL.**
- **Noise compatibility studies and mitigation programs treated areas over 70 DNL and between 63 and 60 DNL differently.**

In short, there have been and will be more actual noise exposure and public health risks: *ignoring the health studies now is just plain wrong*. This point is important and deserves separate consideration, see paragraph 3.

The staff analysis did not *prove* that overall DNL noise exposure is no greater *for any given number of daily operations*. The sponsor did not detail noise events or model DNL contours on a local scale. Previous noise exposure maps placed DNL contour lines parallel to runways based on on-the-ground source noise, with a physical separation of less than 500 feet per DNL. Currently, air crossings of the old DNL contour lines are frequent at angles near 90 degrees.

Alternative 2, the staff recommended and most extensive and expensive alternative, includes possible additional mitigation (2 levels of sound insulation). **The assumption that past sound insulation programs (SIP or ESIP) based on 2002 and earlier flight numbers and patterns are suited for a fixed number of annual operations is invalid.** The models and day-night level (DNL contours) cited in staff reports to NOC were not based on current-year use, flight tracks or fleet mix projected for 2015 or 2020.

The noise studies conducted by the Sponsor and FAA do not jibe with citizens' observations of locally intense noise exposure. **These observations are credible evidence that noise exposure has increased a lot in certain neighborhoods.** The MAC received thousands of complaints, conducted several meetings

³ The issue is that the contours cannot show a change of 1.5 DNL locally, as for a block here or two blocks there, even if the data supports an increase or decrease in average annual intensity at a grid point.

and published numerous reports. At least three related recommendations were made to the MAC by the NOC. **This controversy itself meets criteria in FAA Order 1050-1E, paragraph 501b (4).**

Alternative interpretations using the ground track (map position versus time) and climb rates (attained altitude versus time) data show observations of high intensity overflight events are accurate.

These presentations made at quarterly noise input and NOC meetings should be part of the examined public record and a determination made based on the record as to the likely pollution and noise impacts.

2. Safety needs and Improvement schedules not synchronized.

The EA presentation reports an *“Unacceptable Level of Service ... facilities are congested ... (and, the use of) gates ... exceeds capacity during peak winter periods.”* This lack of capacity and congestion exists because of fleet mix and runway use at peak hours. Increased operations by regional carriers and FAA procedural changes made for safety exacerbate congestion. However, turning flights also increased because of runway and gate use, raising questions about ground traffic congestion and ground safety issues in Alternative 1 or 2.

The results of modeling (SIMMOD) ground traffic may or may not apply. The models extend some input traffic pattern and add movements randomly. ***There has been no independent review of the base patterns or model parameters by a disinterested party.***

The departure headings and runway-use changes increase the need for capital improvements as recognized in long-term MSP plans. Basing the need for safer and more direct access between the terminal gates and the runways based on *annual use* regardless of *peak-hour use* lacks credence. The taxiway bridges are needed for 150+ safe operations per hour now and if more annual operations are scheduled and peak-hour rates are maintained at 150+ per hour.

Movements during off-peak hours are not a safety or demand issue. We suggest therefore that the safer plan is to reduce peak-hour use or bite the \$1 billion bullet now.

3. The health studies.

The Federal Inter-Agency Committee on Airport Noise (FICAN) is exploring, *how* airport operations produce serious public health risks correlated with event noise impacts. Many industrialized countries use event noise limits to plan or regulate airport and airline operations. Perhaps the MAC planning horizon for this potential change is, unfortunately for the neighborhoods, after 2020 -- but 2030?

The EA/EAW is closely related to the MSP 2030 LTCP, and the health studies are a fact that should be included in this EA. The MAC and the FAA need not provide or schedule more capacity than needed on a daily or annual basis if costs are higher per operation, health and safety are affected, and alternative management plans are viable. Considering a reasonable alternative that accomplishes the same goals at less cost and equal or less environmental impact is required by 40 CFR 1502.14(a).

Both event noise intensity and noise exposure map areas would be decreased by rate reductions. More precision navigation courses over less sensitive areas, more gradual ascents and descents, and other noise abating operations would be feasible.

The 1998 FEIS/ROD that authorized the new runway, 17-35, limited noise over 70 DNL and over 65 DNL for 620,000 operations per year, anticipating fleet mix changes that would lessen noise exposure as operations increased over the period 2004 to 2020. The MAC has completed expensive additional programs for 64-60 DNL areas as modeled for 2020 forecast operations.

It is poor public policy to elevate efficiency – unneeded and more expensive operations in this case – if safety is not equally assured and the highly expected adverse consequences for the population unattended or increased.