
Re: MMC Helipad Relocation and associated sound implications

1 message

Alvah <alvah.davis@gmail.com>

Fri, Jul 12, 2019 at 10:10 AM

To: Jean Fraser <jf@portlandmaine.gov>

Cc: "Donaldson, Helen" <hcd@portlandmaine.gov>, Anne Pringle <oldmayor@maine.rr.com>

Hi, Jean and Nell. I'd like to make some initial comments, more or less in draft version, since I don't know the exact timeline for review of the revised Sound Management Plan. I would be very happy to have an informal discussion about these comments before submitting a final version.

I am concerned that DNL (day-night average sound level) is not a very useful scale for a highly intermittent situation, nor does a 10 dBA adjustment to overnight readings suffice to capture the disruptive effect. Capture of peak durations, both night and day, would be much more useful. DNL is a standard that seems better-equipped to capture the effects at an airport, where flight frequency throughout the day would be orders of magnitude greater than at MMC, thus drastically raising the average. To be clear, it is a benefit that flight frequency is expected to be as low as it is; I would like to obtain historical confirmation of peak flight frequency, however, as well as confirmation that all flights have been included in the numbers. Ironically enough, the relative infrequency of flights will likely contribute to their perceived disruption.

I note that MMC financial responsibility for certain sound-mitigation requirements for the properties on Ellsworth and Crescent Streets is in force only if **average** DNL levels exceed the FAA DNL threshold. Highly intermittent and infrequent but severe noise risks being averaged out, but the effects on residents may not be.

I don't see detailed reference in the Plan to the well-documented health effects of loud noise, or to the particular effects of low-frequency helicopter noise, which studies have shown to carry approximately a 10 dB additional perceived effect over measured levels. Unfortunately, the A-adjustment to decibel readings, yielding dBA, further discounts the low-frequency noise of concern rather than the opposite. I think a reference to these potential effects should be noted as an important parameter to consider when the "we're saving lives"—as indeed they do—argument is offered in isolation. Emergency transportation is regulated in many ways; helicopters are clearly not exempt from similar considerations. In addition, raw dB measurements should be included to compare with the A-weighted readings, whose deficits may be particularly significant for helicopter noise.*

*[From <https://www.noisehelp.com/decibel-scale.html>: Compared with dB, A-weighted measurements underestimate the perceived loudness, annoyance factor, and stress-inducing capability of noises with low frequency components, especially at moderate and high volumes of noise.]

On an accountability matter, if average flights per day are rising faster than predicted, a trigger should be implemented for a reassessment and further mitigation efforts. Quarterly reports might be appropriate. I don't have a particular proposal for what the trigger levels should be, but recommend consideration of creating them.

"Emergency care" should be defined more precisely than any helicopter landing at MMC, since noise levels are excluded from city limits in that circumstance. By the current definition, all flights would automatically be excluded from Portland's noise ordinances, leaving us no leverage to request special protocols for flights that might safely be managed as to arrival location and time. The logic is a bit circuitous, to the advantage of LifeFlight, et al.

Duplicating measurements at previous locations indeed seems to have some utility, and I agree that comparisons with previously obtained measurements cannot be complete and may now be of minimal use. In any case, I do not think comparisons to previous measurements, while possibly interesting, are required—it is comparison with current levels and after-relocation measurements that is most significant for understanding effects of the relocation.

I believe additional locations are needed. I see a need for a line-of-sight measurement location in-between the radiuses of CP-4 and CP-6 and -9. The first represents a potential worst case location, which is useful, but CP-6 will have some building shielding, and CP-9 is significantly distant. Some middle-distance readings are needed, since this region of the West End is one that will likely experience a significantly changed sound pattern. With the loss of the sound-mitigation through building blockage that exists now, and a greater height, yielding line-of-sight and -sound to hundreds more homes than the previous location, a significantly changed soundscape seems almost inevitable.

Thanks again for your thorough and quick response to my comments in Wednesday's MMC meeting. Please let me know if we can meet to review these preliminary comments.

Best,

Alvah

On Thu, Jul 11, 2019 at 5:53 PM Alvah <alvah.davis@gmail.com> wrote:

Jean, thanks so much for the quick response; these are exactly the materials I was eager to see. Given the recent Sound Measurement Plan revision and the current review process, I will read it carefully to see whether the measurement locations seem adequate to the expected new exposures in neighborhoods to the south of the MMC campus, which will no longer be buffered by multiple stories of existing building.

A quick question: Jeff Sanders indicated current typical total flight arrivals currently, and expected growth over five years. Do you have more granular data showing such things as historical maximum flights in any single day, a breakdown in terms of typical times of day vs. night (e.g., 7 a.m. to 7 p.m. versus overnight), and, within categories, where the flights originate from?

I do not think the numbers of flights Jeff listed would be of any great concern, at one to two on average per day--even with a near-doubling in 5 years. However, my own recent experience has included observation of as many of 4 arrival/departures within an hour, quite a variance from the average!

Should noise in fact become a source of new concern, I'm eager for us to have considered in advance the parameters that might be exercised, and what would trigger review of current practice. For example, I wonder whether there would be any capability for scheduling flights of certain hospital-to-hospital transfers to daytime. If I understand correctly that the difference between Trauma 1 and Trauma 2 Centers is relatively small (matters of research and publication being much more important for the former), and that Maine has two of the latter, one in Bangor, one in Lewiston, with another just over the state line in Portsmouth, I would imagine at least some patients transferred from those locations might be schedulable. That's just one hypothetical instance of an adjustment that may (or may not) be practicable if noise were to become a significant neighborhood concern. I hope we'll have others at hand already should concerns arise.

Thanks again for the very helpful and quick reply!

--Alvah

On Thu, Jul 11, 2019 at 3:33 PM Jean Fraser <jf@portlandmaine.gov> wrote:

Hello Alvah

I understand from Nell Donaldson that you would like some information regarding the sound implications associated with the relocation of the helipad from the top of the existing employee garage to the top of the East Tower. This relocation moves the pad about 450 ft east and 100 ft higher.

During the site plan review in early 2018 the applicant submitted a sound study, 2 notes to the Planning Board, and the FAA application (all four attached as "WS"-some were in response to Planning Board and staff requests).

The Staff and Board concluded that it was not clear whether any properties were potentially impacted by the relocation, and the following condition of approval was included:

- i. That within 9 months of the date of this site plan approval the applicant shall submit a "*Sound Measurement Plan*" for review and approval by the Planning Authority, for assessing the actual changes in sound impacts on nearby properties between the helipad operating at the existing site and at the new location, including criteria for mitigation where such impacts are severe based on appropriate national standards. The "*Sound Measurement Plan*" is required in the event that the predicted

sound levels are incorrect, and it shall be approved and implemented at least 2 months before the helipad is relocated;

Pursuant to the condition, MMC submitted a *Sound Management Plan* in December 2018 (attached) along with a "peer review" note from their consultants Accentech dated January 2019 (attached). The City asked a consultant to carry out a Peer Review and it was sent in March, 2019 (attached). MMC have recently submitted a revised version of the *Sound Management Plan* (also attached) and it is currently under review.

Please let me know if you have any questions.

thank you
Jean

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