

What's Happening With Aircraft Noise at DCA?

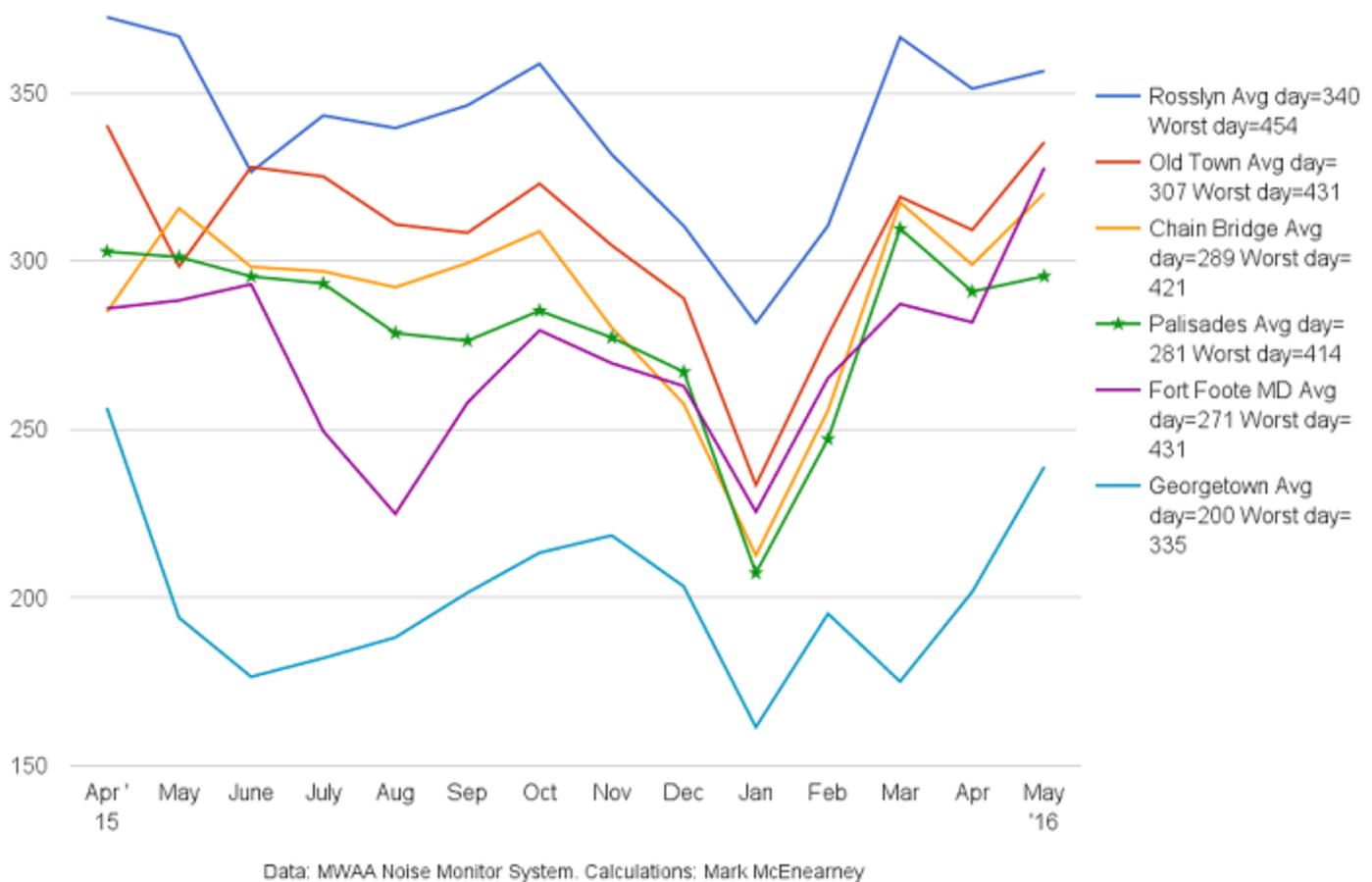
By Mark McEneaney. Revised July 9, 2016

Topics

- Which neighborhoods are getting clobbered?
- How have per neighborhood noise impacts changed since 2010?
- What's driving increasing aircraft noise at DCA?
- What can be done?

Which neighborhoods are getting clobbered?

Figure 1. Number of aircraft noise events above 65 dBA per average day since April 2015



Basically all neighborhoods within a mile or so of flight paths over the Potomac River from Fort Foote to Chain Bridge are getting clobbered. Recently, residents of Bethesda's Tulip Hill neighborhood, Cabin John and Potomac reported [they're getting clobbered too.](#)

How have per neighborhood noise impacts changed since 2010?

Former FAA and Wyle Labs noise expert and Arlingtonian Bill Albee recommends using NA (number of events above threshold) and other supplemental metrics for describing aircraft noise impacts. NA is an FAA approved metric that is easy to understand. Some airport noise offices like [Minneapolis-St. Paul's](#) publish NA estimates. Although MWAAs does not do this, it is straightforward to construct NA estimates using noise monitor data.

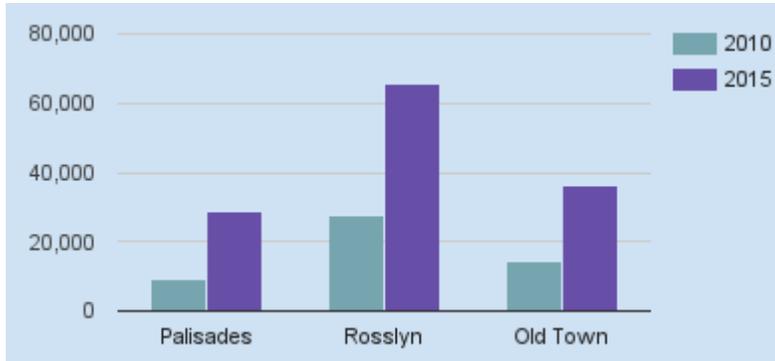
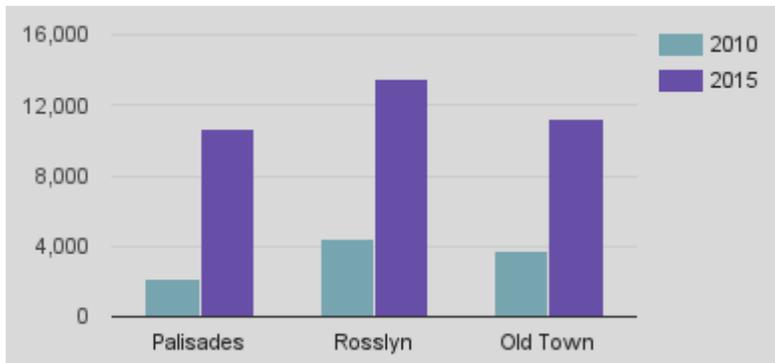


Figure 2. According to MWAAs noise monitor data, the number of daytime aircraft noise events above 70 dBA has increased significantly since 2010 where daytime is defined as 7 AM to 10 PM.



So has the number of nighttime aircraft noise events above 65 dBA.

Table 1. Estimates of changes in the number of loud aircraft noise events since 2010.

	Number of daytime aircraft noise events above 70 dBA			Number of nighttime aircraft noise events above 65 dBA		
	2010	2015	Change	2010	2015	Change
 Palisades	9,431	28,969	207%	2,145	10,647	396%
Rosslyn	27,423	65,738	140%	4,370	13,508	209%
Old Town	14,187	35,979	154%	3,735	11,188	200%

Data: MWAAs Noise Monitor System. Calculations: Mark McEneaney. Notes: (1) MWAAs Noise Officer, Mike Jeck, reported on 4/14/16 that MWAAs Noise Monitor System [undercounted aircraft noise events](#) prior to 2015 and that MWAAs does not know the extent of undercounting. Thus, estimates for 2010 in Table 1 are likely to be lower than actual noise impacts. Percent changes are proportionately affected. (2) David Mould, MWAAs Director of Communications, reported on 4/22 that MWAAs does not have the resources to do a research project to determine the extent of undercounting prior to 2015. (3) Estimates for 2015 are based on the 12 months ending 2/29/16 as data for January and February 2015 were not available.

What's driving increasing aircraft noise at DCA?

For most neighborhoods, two things are driving noise increases: airlines are [flying bigger planes](#) carrying more passengers farther afield (bigger planes + more passengers + more fuel => more takeoff weight => more thrust => more noise; also, bigger planes have more difficulty staying over the river); and airlines are flying later at night and earlier in the morning. For many neighborhoods, recent flight path changes are exacerbating the problem or they are the main culprit.

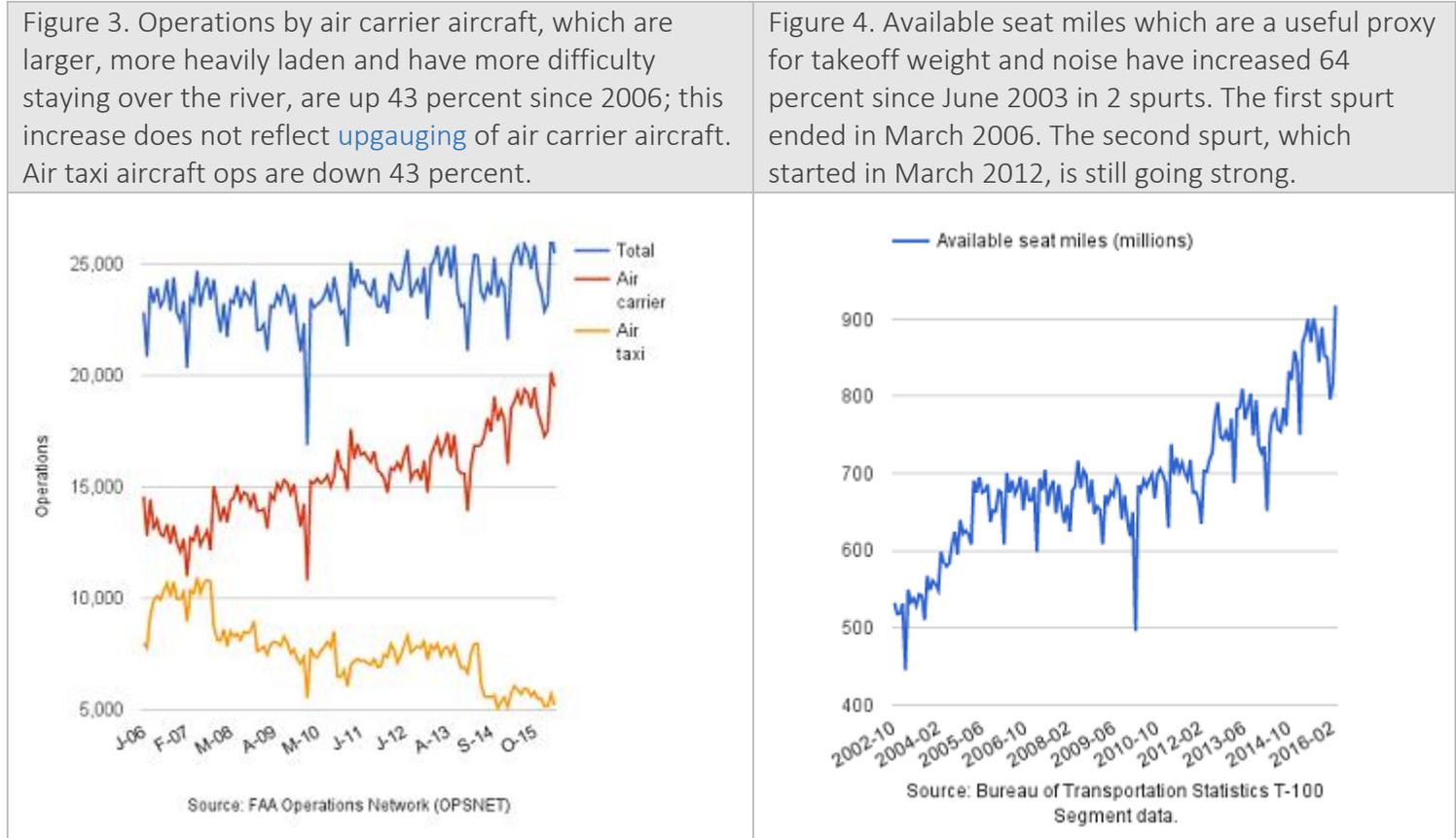
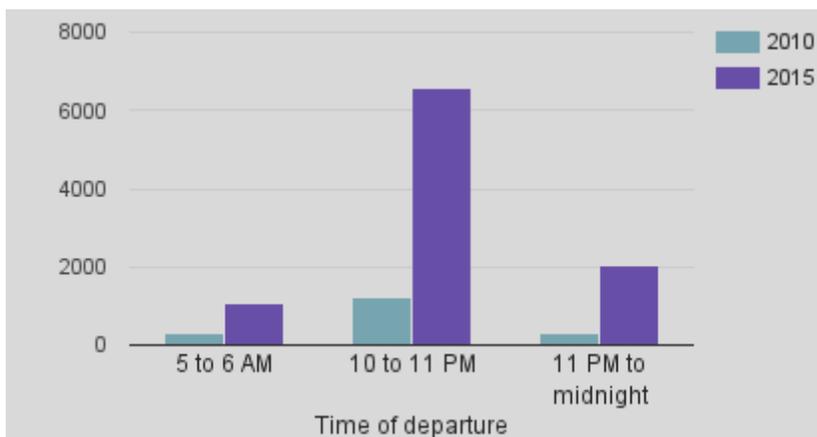


Figure 5. Late night and early morning departures have increased significantly since 2010.



Time of dep	2010	2015	Change
5 to 6 AM	288	1067	270%
10 to 11 PM	1240	6576	430%
11 PM to midnight	305	2021	563%

Data: FAA CountOps Program.
Calculations: Mark McEneaney.

Airlines are [upgrading their fleets](#) with planes that are more fuel efficient and quieter per unit of thrust. However, quieter per unit of thrust does not mean quieter per flight when [takeoff weight per flight is increasing](#). According to the FAA, the rate of improvement in reducing noise per unit of thrust has slowed since 2000 and is not keeping pace with growth in air travel.

What can be done to protect neighborhoods from increasing aircraft noise?

Here are [33 things](#) that can be done.

The DCA airport working group has developed [3 recommendations](#) aimed at increasing time planes spend flying over the river. Proposed changes do not address the root cause problems of increasing nighttime noise and increasing per flight noise. So far nothing has been proposed that will significantly reduce noise impacts for any neighborhoods between Old Town and Bethesda. The recommendation to require aircraft to fly farther south over the Potomac River before turning east or west will reduce noise impacts for neighborhoods near [current turn locations](#) and increase impacts for neighborhoods farther south; since planes will be higher when turning farther south, net noise impacts measured in DNL are expected to be reduced. Unambiguous improvement for all neighborhoods is not possible without restrictions on operations or aircraft types and restrictions are not on the table per MWAA.

Unfortunately, the working group continues to think and work in very small box designed by MWAA and the FAA with the tacit approval of local government officials and Members of Congress in which resources and options available for analyzing, communicating and addressing noise impacts are severely limited and where [Open Meeting Laws](#) and basic concepts such as posting recommendations for public comment do not apply. The working group has no budget, no staff and no measurable goals for reducing noise impacts or [characterizing current and future noise impacts](#) in ways that help everyone understand what's going on and what can be achieved. Working group members, who are not technical experts, are expected to propose solutions to a problem that everyone says is complex vs clarify community expectations for managing aircraft noise and ask technical experts at the FAA to identify solutions that individually or collectively reduce noise impacts for all neighborhoods.

Shifting noise will not restore the fragile balance of interests between neighborhoods, the aviation industry and the flying public that we had a few years ago. If someone is taking too much from the commons, the solution is to take less. What's so complex about that?