

**Congress of the United States**  
Washington, DC 20510

July 7, 2016

Marcia McNutt  
President  
National Academy of Sciences  
500 Fifth Street, NW  
Washington, DC 20001

Dear President McNutt:

Congratulations on your historic election as the first woman to serve as president of the National Academy of Sciences (NAS). We look forward to working with you in your post as you lead the NAS to uphold the highest standards of science for addressing our national needs. We are writing to you today requesting that the NAS conduct a study relating to air traffic noise and pollution and their effects on human health. Numerous communities around the country are experiencing significant increases in airplane noise. In Massachusetts, for example, between January and September of 2015 there were more than 11,000 complaints logged by the Massachusetts Port Authority, which operates Logan Airport in Boston.<sup>1</sup> During a similar time period in 2012, there were fewer than 1,700 noise-related complaints.<sup>2</sup> Further, this rise in noise complaints has not been limited to Massachusetts. Chicago's O'Hare International Airport topped two million jet noise complaints during the first seven months of 2015 — eight times the number filed in all of 2014.<sup>3</sup> There have been spikes in aircraft noise complaints at airports in San Francisco, Baltimore, Phoenix, and other cities.

In Massachusetts, the noise increase goes well beyond the threshold of being an annoyance, and there is growing concern in our communities that aircraft noise could be impacting human health. This concern is not just anecdotal, and there are several studies showing associations between aircraft noise and various health problems. In fact, a 2013 study by the Harvard School of Public Health (HSPH) and the Boston University School of Public Health (BUSPH) found that older adults exposed to aircraft noise, especially at high levels, may face an increased risk of being hospitalized for cardiovascular disease.<sup>4</sup>

While there has been some research in this area, we believe this issue merits much more independent and high-quality objective research to help Congress assess this problem and take appropriate action. Therefore, we

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<sup>1</sup> Seltz, Johanna. "FAA hearing more complaints over Logan airplane noise." *The Boston Globe*, Nov. 24, 2015, <https://www.bostonglobe.com/metro/regionals/south/2015/11/24/faa-hearing-more-complaints-over-logan-airplane-noise/CgHxuliUwctgrHOpJS9UP/story.html>.

<sup>2</sup> Ibid.

<sup>3</sup> Hilkevitch, Jon. "O'Hare noise complaints top 2 million for year." *Chicago Tribune*, Sept. 4, 2015, <http://www.chicagotribune.com/news/ct-ohare-noise-complaints-met-0905-20150904-story.html>.

<sup>4</sup> Andrew W. Correia, Junenette L. Peters, Jonathan I. Levy, Steven Melly, and Francesca Dominici "Residential exposure to aircraft noise and hospital admissions for cardiovascular diseases: multi-airport retrospective study", *BMJ*, online Oct. 8, 2013, <http://www.bmj.com/content/347/bmj.f5561>.

request that the NAS conduct a thorough study regarding the increase in airport noise-related reports and their impact on human health. Specifically, we ask that the NAS convene a multidiscipline expert committee to conduct a study to determine the causes of these increased noise reports and the health impacts of increased jet noise in these communities, and to author a report with recommendations for remedial action.

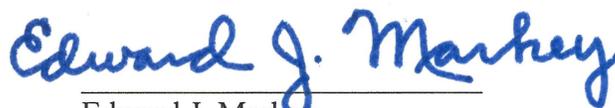
This study and report should include:

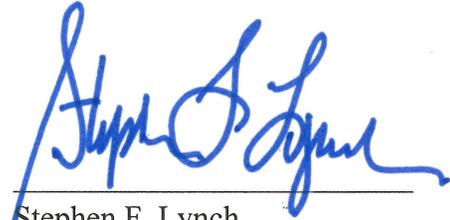
- an evaluation of the human environment and specific health impacts related to aircraft noise and pollution, including carbon dioxide or other emissions associated with air quality;
- an analysis regarding the statistical relationship of discrete noise-related complaints in communities located near “large hub” airports and selected “medium hub” airports situated in densely populated areas that have experienced changes in noise exposure since the implementation of new Federal Aviation Administration (FAA) flight paths, and to assess absolute levels of noise exposure experienced by those registering noise complaints;
- a review and evaluation of the FAA’s current policies and abilities to respond and address noise concerns, including FAA policies related to Day-Night Average Sound Level (DNL);
- an analysis of what is an appropriate DNL limit, including alternative methodologies to measure community noise exposure;
- an analysis of the processes used to determine how flight paths could be altered to mitigate the noise caused by these flights, including the utilization of noise mapping;
- a thorough analysis of aircraft noise reduction technologies, including a cost-benefit analysis of technologies currently utilized on aircraft that operate in the European Union and other high air traffic areas;
- provide recommendations on the best and most cost-effective approaches to address increased aircraft noise and other issues as the expert committee considers appropriate.

Additionally, we ask that the Academy accept and evaluate evidence and comments from State and local governments and where applicable, local resident advisory committees. We greatly appreciate your time and attention to this request and believe that a study and report by the National Academy of Sciences would provide policymakers with the necessary and key guidance to address this growing problem in our communities.

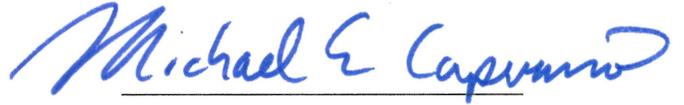
Sincerely,

  
Elizabeth Warren  
United States Senator

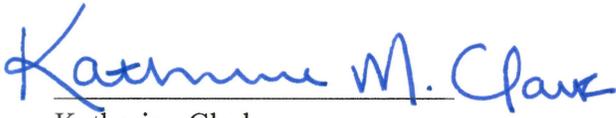
  
Edward J. Markey  
United States Senator



Stephen F. Lynch  
Member of Congress



Michael E. Capuano  
Member of Congress



Katherine Clark  
Member of Congress

