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May 8, 2016

Representative Stephen F. Lynch
U.S. House of Representatives
2369 Rayburn House Office Building
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Senator Elizabeth A. Warren
United States Senate
317 Hart Senate Office Building
Washington, DC 20510

Representative Michael E. Capuano
U.S. House of Representatives
1414 Longworth House Office Building
Washington, DC 20515

Senator Edward J. Markey
United States Senate
255 Dirksen Senate Office Building
Washington, DC 20510

Re: **Airplane Noise and Pollution/Request to National Academies of Sciences,
Engineering and Medicine**

Dear Senator Warren, Senator Markey, Representative Lynch and Representative Capuano:

We are grateful to Senator Warren for introducing the FAA Accountability Act of 2016 and to Representative Lynch for introducing, and Representative Capuano for co-sponsoring, H.R. 5075, the Airplane Impacts Mitigation Act of 2016, the latter of which would require the FAA to engage various schools of public health to study the health impacts of increased air traffic over certain communities. As you know, the FAA's implementation of the NextGen program and its adoption of concentrated flight paths known as RNAVs have adversely impacted the public health and the quality of life of many residents of the Town of Milton and other communities near Logan Airport and other airports around the country. We appreciate your efforts to date to address these ongoing concerns.

We write to identify an important action that we believe Congress should take and would benefit all communities across the country that are impacted by RNAVs.

As you know, the Office of Congressional and Government Affairs of the National Academies of Sciences, Engineering and Medicine (the "National Academies") is often called upon by Congress to review and advise Congress as to scientific and technical matters. We ask that

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Congress make a formal request to the Health and Medicine Division (“HMD”) (formerly known as the Institute of Medicine) of the National Academies to form a committee of experts that will synthesize and report on all current scientific knowledge relating to air traffic noise and pollution and their effects on human health. We believe that a review and report by the National Academies is warranted by the FAA’s NextGen program and RNAV navigation system. We ask all of you to pursue this course of action, either in your individual capacities or through the Quiet Skies Caucus, as expeditiously as possible.

We believe that a review by the National Academies should proceed forthwith because numerous communities across the country that are located near airports have been suffering from excessive air traffic for the past few years. In Milton alone, many residents now have 400 to 500 planes per day traveling at 2,000 feet above their homes, often for days on end. We receive many calls and emails from residents who report sleep disturbance, sleep deprivation, anxiety, and concerns about the pollution to which they and their children are exposed.

An HMD committee review and report can be undertaken while the health studies that Representative Lynch’s and Representative Capuano’s bill proposes are being conducted. We believe that an HMD report would serve an important and perhaps complementary function. It is possible that, if begun expeditiously, HMD would produce a report on health impacts, albeit a generalized one, more quickly than the health studies proposed under H.R. 5075 would.

We understand that there already exists strong, current scientific evidence that will define the constant exposure to noise and pollution from air traffic as a national public health problem, especially for those citizens unfortunate to live under one of the arrival or departure RNAVs. Evidence of this public health problem appears across disciplines. For example, the 2014 Hudda *et al.* study¹ measured air pollution under the parallel runway arrival paths to the Los Angeles Airport (“LAX”). The researchers found a doubling of ultrafine particle (UFP) concentrations extending more than 10 miles downwind from LAX along these arrival paths. UFP concentrations were four times higher than background concentrations at a distance of six miles. Milton is located between six and ten miles from the end of the parallel arrival runways 4R and 4L at Logan Airport and, thus, our residents may be similarly affected.

Additionally, it has been brought to our attention that a recent epidemiology study by Volk *et al.*² found that exposure to traffic-related air pollution, nitrogen dioxide, PM_{2.5}, and PM₁₀ during

¹ Emissions from an International Airport Increase Particle Number Concentrations 4-fold at 10 km Downwind, Neelakshi Hudda, Tim Gould, Kris Hartin, Timothy V. Larson, and Scott A. Fruin, *Environ Sci Technol.* 2014 Jun 17; 48(12): 6628–6635, Published online 2014 May 29. doi: 10.1021/es5001566

² Traffic-Related Air Pollution, Particulate Matter, and Autism, Heather E. Volk, PhD, MPH; Fred Lurmann; Bryan Penfold; Irva Hertz-Picciotto, PhD; Rob McConnell, MD, *Arch Gen Psychiatry.* (2013) Published online November 26, 2012. doi:10.1001/jamapsychiatry.2013.266

pregnancy and during the first year of life was associated with autism. The authors caution that further epidemiological and toxicological examinations of likely biological pathways are needed to help determine whether these associations are causal. This study, together with dozens of others conducted by highly regarded scientific researchers, shows links between these pollutants and health risks including heart disease, mortality, chronic obstructive pulmonary disease, asthma, and cancer.

Along with the health problems from aviation pollution, there is also evidence that noise from low flying aircraft is associated with negative health effects. A study by Correia *et al.*³ published in 2013 in the British Medical Journal showed that residential exposure to aircraft noise increased hospital admissions for cardiovascular diseases in older people living near airports. Moreover, the World Health Organization Regional Office for Europe (“WHO/Europe”) notes on its website that

“[e]xcessive noise seriously harms human health and interferes with people’s daily activities at school, at work, at home and during leisure time. It can disturb sleep, cause cardiovascular and psychophysiological effects, reduce performance and provoke annoyance responses and changes in social behaviour.”⁴

A WHO publication, “Night Noise Guidelines for Europe”, notes that “[e]nvironmental noise is a threat to public health, having negative effects on human health and well-being.”⁵

The foregoing are examples of growing scientific literature on this important public health topic. A review and report by HMD would bring national attention to the growing problems caused by the FAA’s NextGen system. Such a report would synthesize all current scientific knowledge of exposure to excessive noise and air pollution from air traffic, with an eye towards the increased health risks brought about by RNAVs. The primary charge for HMD’s committee of experts should be to determine public health risks from exposure to aviation traffic pollution and noise.

³ Residential exposure to aircraft noise and hospital admissions for cardiovascular diseases: multi-airport retrospective study, Andrew W Correia, Junenette L Peters, Jonathan I Levy, Steven Melly, Francesca Dominici, BMJ 2013; 347 doi: <http://dx.doi.org/10.1136/bmj.f5561> (Published 08 October 2013)

⁴ <http://www.euro.who.int/en/health-topics/environment-and-health/noise/noise>

⁵ <http://www.euro.who.int/en/health-topics/environment-and-health/noise/publications/2009/night-noise-guidelines-for-europe>

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We believe that a Congressional request to HMD is necessary and timely. Thank you for considering this request.

Sincerely,



J. Thomas Hurley, Chairman



David T. Burnes, Secretary



Kathleen M. Conlon, Member

cc: Cindy L. Christiansen, Ph.D., Massport and Logan CAC Representative
Milton Airplane Noise Advisory Committee
Milton Board of Health
John P. Flynn, Esq., Milton Town Counsel
Karis L. North, Esq.