

To: Congressman Stephen Lynch and Senator Elizabeth Warren

From: Cindy L. Christiansen, PhD, Town of Milton Massport Community Advisory Committee Representative; cLcmilton@gmail.com *CLC*

RE: Need for a **National Academy of Medicine Consensus Report** on the Public Health Effects of the FAA's NextGen technology for satellite-based navigation systems

Date: July 11, 2017

About a year ago your office looked into my request that instead of another aviation health impact studies, such as the one currently funded by the FAA to Boston University School of Public Health, Professor Jonathan Levy, Principal Investigator, that what is needed is a National Academy of Medicine Consensus Report. In this memo I am making a desperate plea that you add an amendment to the FAA Reauthorization Act in your respective Chambers that would require a National Academy of Medicine consensus report from a committee of experts in health and environmental sciences and I provide information about why a National Academy of Medicine Report is needed now. We need a consensus report from a credible panel of experts to stamp this as a public health problem **as our first step** to reduce the use of government for industry gain at the expense of the health and safety of those citizens residing underneath these airborne highways.

As you know, over the last several years, the FAA has implemented NextGen technology that replaces radar navigation with satellite-based navigation systems (GPS). Now and because of the new technology, concentrated flight paths that vary by less than a few feet vertically and laterally, increased airline operations, decreased separation, and lower altitudes have created a **public health crisis** in communities across the country. The new navigation system was implemented without any investigation into the human capacity to withstand the concentrated and relentless aviation noise and exposure to pollution, but the evidence is there, in the peer-reviewed literature, that there are significant detrimental effects on population health that are associated with these changes. We need a National Academy of Medicine committee of experts to synthesize the evidence and to report their consensus. **I ask that you lead efforts for an amendment to the FAA Reauthorization bill, in your respective Congressional Chambers, to include that:**

The FAA and/or major airports fund a National Academy of Medicine consensus report on the physical and mental health effects associated with concentrated flightpaths, increased operations, decreased separation, and lower altitudes that are a result of the FAA's implementation of NextGen technology and GPS navigation systems.

Why a National Academy of Medicine Consensus Report? Countless peer-reviewed articles appear in high-impact journals from a wide set of disciplines, including medicine, health policy,

environmental health, epidemiology, that report on studies about sleep deprivation, cardiovascular disease, depression, cancer, and respiratory illness, etc. from transportation noise and pollution exposure. No one can ethically study the health effects in humans from exposure to noise and exhaust from planes. Similarly, the research world could not do controlled experiments for other public health problems such as second hand smoke exposure, lead exposure from water or other sources, gun violence, and experiences of military service and PTSD. All of these public health problems, and many others, were defined because of a **synthesis of evidence from experts in multiple fields of study** followed by rigorous epidemiology and non-experimental health outcome studies, such as the one proposed in the current House Reauthorization bill.

The attached appendix contains additional information on National Academy of Medicine consensus reports.

Appendix: Material from the National Academies Website

What is an [Expert Consensus Report](#)?

It's a report produced by a committee of experts convened by the National Academies (most often in the name of the National Research Council, but also in the name of the Institute of Medicine, the Transportation Research Board [another division of the National Research Council], the National Academy of Engineering, and occasionally the National Academy of Sciences) to study a specific scientific or technological issue of national importance.

...

Through these committees, the Academies produce about 200 to 250 consensus reports each year. These reports are viewed as being credible and authoritative because of their independence and the unique ability of the Academies to recruit the world's top experts to serve on these committees and because of the unique study process. ...

Qualities of the Academies' expert, consensus reports include:

- **Independence.** Free from external pressure, the Academies are able to examine controversial issues without reference or regard to politics or special interest. They are not part of the federal government.
- **Expertise.** The Academies have access to the nation's and world's top scientific and technical experts to produce their reports.
- **Objectivity.** The rigorous committee process for balancing views and avoiding conflict of interest ensures impartial, unbiased advice.
- **Integrity.** Every one of the reports follows a meticulous study process to ensure the findings match the evidence and is submitted for an independent external peer-review by anonymous experts prior to publication, thus safeguarding the credibility of the findings.
- **Evidence-based.** All findings, conclusions, and recommendations are based on the best available data.
- **They are produced by non-stakeholders.** Consensus reports of the Academies are based on the evidence available to address the issues being studied. When the reports are completed the reports are made public and distributed to interested parties and the authoring committees are disbanded. The Academies do not become stakeholders on the issues in the reports and lobby their conclusions.
- **Nearly all reports are done at the request of others.** Academies consensus studies are done at the request of the Federal Government, state governments, and some foundations. Only a few are done at their own initiative (typically on topics that are either so urgent that they should be done without delay, such as a report on the ability of science and engineering to address homeland security that was initiated right after Sept 11, 2001 or are important topics that will not likely be subject of a governmental request, such as guidelines for stem cell research.)

- **Academies leaders approve all studies.** The Academies are not required to address any issues that their leaders do not feel are appropriate (e.g., are technical and objective in nature and have adequate information available to make findings.)
- **The Academies do not produce consensus reports for private for-profit firms with direct interests in their topics.**