

To: City of Cambridge Planning Board, Chair H. Theodore Cohen  
City of Cambridge Community Development Department, Iram Farooq, Asst City Manager  
City of Cambridge Department of Public Works, Owen O'Riordan, Commissioner  
City Manager, Louis DePasquale

From: Dr. Sarah Slaughter, Cambridge resident, CEO, Built Environment Coalition

Date: September 2, 2017

Re: 55 Wheeler Street Permits, and all permits in Fresh Pond and Alewife Brook area

**I respectfully submit that the City of Cambridge Planning Board, Community Development Department, and Department of Public Works should declare a moratorium on all construction permits (for new building construction, major renovation, and infrastructure) for at least two (2) years in the Alewife area, particularly those areas near Fresh Pond Reservoir and the Alewife Brook. In particular, I request that the Planning Board deny all permits for the proposed residential development at 55 Wheeler St. in the Alewife quadrangle. In addition to its highly vulnerable location on the Alewife floodplain, the Wheeler Street project directly abuts a major electric power sub-station, which could pose additional hazards to future residents should the area suffer significant flooding.**

Rationale:

The Alewife area will flood, and pose significant risks for injury and death, as well as major property damage, as highlighted in the recently released *Cambridge Climate Vulnerability Assessment* (April 2017),<sup>1</sup> and discussed in the Climate Change Preparedness & Resilience Alewife Public Meeting on April 12, 2017.<sup>2</sup> In addition, flooding in this region will threaten the Fresh Pond Reservoir, the public water supply for the City of Cambridge, with damage and contamination from hazardous and toxic chemicals from legacy and current operations in the area. Fresh Pond Reservoir is already threatened by the expansion of impermeable surfaces that block groundwater recharge from the main catchment areas to the northwest and west of the pond.<sup>3</sup>

As we currently see the effects of Hurricane Harvey in Texas and Louisiana, we should acknowledge the inherent risks of maintaining and expanding built facility assets in the vulnerable areas around Alewife. We have a moral and ethical – as well as legal – responsibility to mitigate those risks, which will not only effect Cambridge residents and businesses, but all of the property owners along the length of the Alewife Brook and the upper reaches of the Mystic River in the towns of Arlington, Somerville, Winchester, Medford, and Everett.

The City of Cambridge (and specifically the Planning Board, CDD, and DPW) may be held liable for damage occurring from increased flood damages as precipitation rates increase, along with other climate change impacts. Recent legal advice for wetland and flood plain managers includes:

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<sup>1</sup><http://www.cambridgema.gov/CDD/Projects/Climate/climatechangeresilienceandadaptation>

<sup>2</sup><http://www.cambridgema.gov/CDD/Projects/Climate/~media/40EE7AAF705B404FBB2E9949B3EA15ED.ashx>

<sup>3</sup> Sinclair, J. (2009). *Fresh Pond: The History of a Cambridge Landscape*, MIT Press, Cambridge, MA, p. 131.

"[C]ourts have widely held governments liable in cases involving more traditional flooding and erosion for increasing flood damages on upstream, downstream or adjacent lands. And, successful suits with climate change elements or based primarily on climate change where flooding and damages caused by government actions or inactions are increased or would not ordinarily occur may be expected in the coming years. This is particularly true where scientific studies quantify climate change and increases in the frequency and intensity of flooding and where flooding and flood damages due to climate change are combined with flooding from more traditional flooding and erosion." (p. iv)<sup>4</sup>

As noted in the 2008 City of Cambridge DPW report, "Development within the floodplain of a river can increase flood impacts beyond those previously mentioned. New structures constructed within the floodplain may displace floodwaters such that the elevation of those waters increases, exacerbating flood conditions elsewhere." (p. 1-8)<sup>5</sup>

Current guidance to new residential developments within these flood-prone areas often does not include full disclosure to tenants (particularly rental units) on the risks associated with living in these buildings. For example, the City of Cambridge DPW guidance for the (recently permitted) residential building on the site of Lanes & Games states, "The expectation is that the [Cambridge Fire Department] standard equipment used for emergency response will be modified in the future and may include high water vehicles, amphibious vehicles or additional boats. Residents and property owners must also prepare themselves for evacuation and sheltering in place." An informal survey of residents in several of the newer apartment buildings near Alewife revealed that none of these residents had been informed that the underground garage would be expected to flood during an extreme rain or storm event, and that their vehicle(s) and other items stored in those areas would be at risk of major damage.

A two-year moratorium on all new construction and major renovation in this area would provide time for analysis of these risks and evaluation of effective mitigation actions. The Envision Alewife planning team should be redirected to plan for flood storage and hazard mitigation by creating significant open and unpaved spaces rather than for further residential development. Funding for planning and implementation of hazard mitigation strategies is available from several sources, including the FEMA Hazard Mitigation Program, Massachusetts Emergency Management Agency, and other Federal, state, and regional sources.

One possibility is to re-establish the water storage capacity that once existed with the Great Swamp, which originally extended from Fresh Pond to Spy Pond (roughly the area between Concord Ave and Route 2). The Great Swamp around Fresh Pond used to act as a huge storage basin for rainwater and water flow, which ensured healthy vibrant natural systems and human communities. Cambridge and adjoining communities could take this critical opportunity to implement significant wetlands regeneration in the currently under-developed land to restore the stormwater storage and flow capacity, and thereby enhance the health, safety, and well-being of Cambridge residents, mitigate the serious risks associated with climate change impacts, and protect the City's Fresh Pond water supply from contamination.

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<sup>4</sup>[https://www.aswm.org/pdf/lib/government\\_liability\\_and\\_climate\\_cahnge\\_kusler\\_0416.pdf](https://www.aswm.org/pdf/lib/government_liability_and_climate_cahnge_kusler_0416.pdf)

<sup>5</sup>[http://www.cambridgema.gov/~media/Files/publicworksdepartment/stormwatermanagement/wastewaterandstormwaterguidance/DRAFT\\_Version%201%20Guidance%20Document\\_May\\_2008\\_Sect\\_1\\_through\\_5.ashx](http://www.cambridgema.gov/~media/Files/publicworksdepartment/stormwatermanagement/wastewaterandstormwaterguidance/DRAFT_Version%201%20Guidance%20Document_May_2008_Sect_1_through_5.ashx)

It has been done before. In 1965, the Army Corps of Engineers analyzed the feasibility and benefits of restoring a large natural wetlands area at the head of the Charles River, in response to massive flooding along the river that caused injuries, deaths, and property loss. The Army Corps found that these restored wetlands were significantly less expensive than other engineered alternatives, and, 40 years later, the natural valley storage area of 8,000 acres at the head of the Charles River continues to provide critical stormwater storage as well as vibrant natural systems that make up a popular recreation area.<sup>6</sup> The City of Cambridge could apply a similar approach for the Fresh Pond and Alewife Brook area.

Dr. Sarah Slaughter, NAE NAC  
CEO and President  
Built Environment Coalition  
11 Stearns St.  
Cambridge, MA 02138  
[sarah@builtenvironmentcoalition.org](mailto:sarah@builtenvironmentcoalition.org)  
[www.builtenvironmentcoalition.org](http://www.builtenvironmentcoalition.org)

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<sup>6</sup> <https://urpl590resilience.wordpress.com/2016/05/01/natural-valley-storage-in-the-charles-river-watershed/>