

ROUNDTABLE/WORKING MEETING APRIL 9, 2018 – SULLIVAN CHAMBER AT 5:30 PM

CLIMATE CHANGE PREPAREDNESS AND RESILIENCE DRAFT PLAN FOR ALEWIFE

DATE April 9, 2018

TIME 5:36 PM

LOCATION Sullivan Chamber

PURPOSE To discuss the draft version of the Climate Change Preparedness and Resilience Plan for Alewife

ATTENDEES Mayor McGovern, Vice Mayor Devereux, Councillors Carlone, Kelley, Mallon, Siddiqui, Simmons, Toomey and Zondervan, City Manager Louis DePasquale, Deputy City Manager Lisa Peterson, Assistant City Manager for Fiscal Affairs David Kale, Assistant City Manager for Community Development Iram Farooq, Susanne Rasmussen, Director, Transportation and Environmental Planning, CDD. John Bolduc, Environmental Planner, CDD, Sam Lipson, Director Environmental Health, Health Department, Kari Sasportas, Health Department, Nancy Glowa, City Solicitor, Owen O’Riordan, Public Works Commissioner, Kathy Watkins, Engineer, Public Works Department, Will Durbin, Chief of Staff, Mayor McGovern, Deputy City Clerk Paula Crane and City Clerk Donna Lopez.

OTHER ATTENDEES Gary Mello, Peter Valentine, Robert LaTremouille and Nancy Ryan.

ADJOURNMENT On motion of Vice Mayor Devereux the meeting adjourned at 7:42 PM.

DISCUSSION SUMMARY

Vice Mayor Devereux convened the meeting at 5:36 PM and stated the purpose. She stated that the meeting is being audio and video recorded and that listening devices are available to the public if needed. There will be no votes taken and no public comment. She gave context for the meeting.

In January she submitted a Policy Order to schedule this meeting on the draft Climate Change Preparedness and Resiliency Plan for Alewife. She stated that now we understand the risks better, what should the City be doing to plan and prepare and to deal with what is ahead with climate change. She mentioned that this week is comprised of many meetings that relate to climate preparedness and there is a lot of opportunity to plug into this work. Introductions were made. An agenda was provided (ATTACHMENT A)

City Manager DePasquale stated that Cambridge is ahead of most cities/town. The climate change threat is taken seriously on how it will affect Cambridge and all other communities. Cambridge has

the funds to move ahead and put plans in action. Cambridge's Vulnerability Assessment Plan is more advanced than fifteen other communities that attended a meeting at MAPC. It is important to look at the studies that show this is what happens if nothing is done. He is proud how far Cambridge is ahead and the plans put into place. How do you do have developers address issues for the future. He thanked all who have worked on this effort. He stated that looking at how envision Cambridge impacts this plan.

Mr. Bolduc gave a summary of his PowerPoint presentation (ATTACHMENT B).

He spoke about how climate change may affect Cambridge. A Vulnerability Assessment was done. He stated that climate change is a threat to Cambridge's economy and public health. He stated that the graphs showed increased heat vulnerability, precipitation and flooding. Precipitation is becoming more intense and frequent. Alewife and The Port currently experience flooding and it will increase. Storm surges will come to Cambridge and it will be a new type of flooding. Cambridge is located behind the Charles River and the Amelia Earhart dam. The dams act as barriers for storm surges. He stated that Alewife faces the most threat from flooding. By 2070 flood risk is once every 5 years in Alewife. The volume of water from the surges is eminent. All the details are in the Vulnerability Report. The Cambridge of today was built for the past. Risks can be reduced but flood in the future will be a part of life. He spoke about the CCPR Vision and plan. The approach includes 4 strategies. Many facets need to be used to protect Cambridge. He stated that the redevelopment can be harnessed. He stated that the goal is to develop a city-wide plan. Alewife and The Port are being used to develop the city-wide plan. The Alewife plan is complete and The Port plan will begin. He outlined why the Alewife area was selected for the first pilot of the study. He explained maps showing precipitation flooding for the 100-year flood and storm surge flooding, both for 2070. The last map showed the heat vulnerability for 2030. He spoke about the strategies, the first being a prepared community to build stronger social connections and preparing the neighborhood to respond. He highlighted neighborhood resilience hubs and cooling centers. The second category is adapted buildings to protect buildings against projected climate change impacts. First floors are being raised or flood proofed. How to apply green infrastructure is being reviewed. The third strategy is resilient infrastructure to ensure continued service or a speedy recovery from a community-wide infrastructure system. He spoke about extending the Huron Avenue barrier and installing berms to manage flood flows and the storage of runoff. A grant was submitted by Cambridge but was not accepted, but NOWA is reviewing the application. There is an environmental bond bill pending at the legislature. The fourth strategy is resilient ecosystems to enhance the living environment to integrate the green infrastructure to mitigate urban heat island effect. If all elements are used a resilient Alewife can be achieved. He spoke about the materials available on the subject.

Ms. Farooq stated that Vision Cambridge was woven into this presentation. To dive into the Alewife area from the preparedness and resiliency perspective as it relates to development is a rare opportunity. A city can still be functioning and built for the development for 2070. There will be zoning strategies and design strategies forthcoming including working with new development the Public Works Department, works with developers to ensure that buildings are being resiliently built to the 2070 flooding. Location of generators and places where phones can be charged are also being taken into consideration. She stated that the state and the region are coming together to work on these matters. She stated that information is being shared because Cambridge is ahead of the curve. Working on community and individual resiliency is important. Cambridge is a mostly built out city and

to retrofit buildings will be quite a venture. Capacity and networks need to be built and are critical. The good news is that a lot of people are engaged in this process. The Cambridge Compact for a Sustainable Future has taken on resiliency as one of its major areas of intervention. The information will be used to work on over a long period of time.

Vice Mayor Devereux showed the brochure on protecting your home from flooding.

Councillor Carlone stated that # 6 is the storm surge plan and it is hard to tell the percentages. He suggested in the Alewife area, in white letters you could put what the numbers are. He stated that the barrier to block surges at Fresh Pond is 2.5 feet high. Mr. Bolduc stated that berms are being designed. Ms. Watkins stated that each location needs to be looked at individually; some can be 4 feet. Councillor Carlone spoke about the residue from flooding; who is responsible for cleaning up the residue. Mr. O’Riordan stated that the April 14, 2010 flood impacted basements in the City. Property owners were responsible, but Public Works picked up trash and mattresses. Councillor Carlone questioned Slide 14 using flood proof materials. Mr. Bolduc stated that the first floor would be above the 10-year flood and the first-floor materials will be used to prevent flooding.

Ms. Watkins explained that that to build to the 2070 storm and think about recovering from the 10-year flood. Councillor Carlone stated that 75% of parcels are at additional flood storage, he believes that the Master Plan goes to 60% development. He stated that he would like to see the two coordinated. He stated that the City cannot plan for a 100-year flood. In Alewife it is 10 feet, the only hope is to educate the population to add additional protection above the 4-foot plan. Councillor Carlone questioned the significant amount of green infrastructure and asked what does this mean. Mr. Bolduc responded that they were looking at bio detention basis, porous pavement and green roofs. Councillor Carlone stated that the goal might be that within requirements, regulation of green roofs would be beneficial. Mr. Bolduc stated that the City also has the option of white roofs as a cooling measure. He further stated that white roofs are competitive with conventional roofs.

Councillor Zondervan stated that he has worked on this subject for many years. How do you decide at what level of heat or sea level will the City respond to? If building today at a 10-year flooding storm and if it is worse the City is locked in. Mr. Bolduc stated that there are many moving parts. The Assessment has been done with projections that are the worst-case scenario as it relates to emissions. Looking at ways to moderate the risk to build barriers along the river and the dams will change the map. The measure that property owners need to take needs to be feasible. He stated that if there is no more development this does not mean there is no risk. This is a balancing act. The best available information is used to plan. Ms. Watkins noted that this is a living document. The projections would be updated overtime. Councillor Zondervan stated that if the requirement is changed in 5 years then everything built is beyond the time but he does not want the impacts underestimated. Is there a formula with emission and sea level that can be adjusted over time? He asked how did you on decide 2070. Mr. Bolduc explained that between 2070 and 100 years there is a small difference. Ms. Farooq explained that Councillor Zondervan said that he worked with many of the staff on this issue for many years. He asked how we decide what level of heat and flooding we are going to respond to. He said that this is a dynamic situation and some of the sea level rise estimates go as high as 6 feet. He said that this is not good news. He asked how to incorporate that into our thinking. Mr. Bolduc said that it is complicated. He said that we are not imposing a simple requirement because there are a lot of moving parts. The assessment was done using “worst case” scenarios. He said that one moving part

is that the Paris Climate Agreement which will affect what the impacts are. They are looking at ways to moderate the risk by building barriers along the river which will change the contour of the maps that were shown. He said that the measures that you would want property owners to implement should be feasible. They will do a financial analysis further down the road. He said that if we say no more development, that does not mean that there is no more risk. Kathy Watkins added that they have been clear that they do not see this as a static document. It would be updated on a regular basis. She said that this would be updated regularly updates and reevaluated. Councillor Zondervan said that if we change the requirements in 5 years, everything built before the change will be behind the times. He asked if there is a relatively understandable formula that could be presented that says these are the emissions and the sea levels and based on that we can assess the flood risk that we are trying to mitigate. Ms. Farooq said that most developers now build with 50 years as an outside horizon. Commercial development is shorter. 2070 is a comfortable time horizon to be thinking of. Councillor Zondervan said that there is an obvious tension between more buildings and greener infrastructure. How do we make that balance? Mr. Bolduc said that in the near future, flooding is the primary flood risk at Alewife. He said that planning for storm surge flooding is the right thing to think about. Kathy Watkins said that many of the sites they are looking at are redevelopment sites. Mr. Bolduc said that green infrastructure will not help with storm surge risks. Councillor Zondervan asked for clarification. Mr. O’Riordan said that the ability to mitigate that with green infrastructure could not happen. Councillor Zondervan said that there is a balance to be struck.

Councillor Mallon stated that enough storm water storage cannot be built and we need to build barriers to prevent this. Is there a plan B with Somerville and Chelsea if the grant is rejected for the second time? Mr. Bolduc stated that this has not been worked out yet. It is hoped that the environmental bond bill will be a possibility for funding. There are other sources to be considered. Councillor Mallon asked how much funding. Mr. Bolduc responded it was \$2 million, not just for Cambridge. Councillor Mallon asked when adopted building, zoning and financial analysis will be done. Mr. Bolduc stated that during The Port process some will be done. Councillor Mallon asked if he would suggest waiting on the zoning until this is done. Mr. Bolduc stated that it needs to be decided if zoning is the appropriate vehicle. There are incentives from the state with new equipment.

Ms. Rasmussen spoke about a new program for an energy audit to get new equipment. These programs are integrated with the energy companies. Councillor Mallon wanted to wait for zoning until financial analysis is done. Ms. Farooq stated that we need more information. Zoning for Alewife will be coming to City Council that is more resilient. Councillor Mallon asked if the City is considering white pavement. Ms. Watkins stated that it has been reviewed but wanted to know how it stands up. It is being considered as a pilot.

Councillor Carlone spoke about roadwork with a pale red brick color which is not hot.

Councillor Siddiqui said that it was discussed that more than 400 affordable housing are at risk for flooding. She asked what type of process the City has for reaching vulnerable communities. Is there a plan for engaging the vulnerable populations? Mr. Bolduc said that for the Alewife area, they were not happy with the level of engagement that they achieved so they are trying to redesign the approach in the process by producing more materials in multiple languages with more direct engagement. They are hoping to gain a broader level of participation in the next phase.

Councillor Siddiqui said that regarding long term goals that are guiding decisions that the City is facing. She said that one of the solutions is public pools as a resource. She asked if there is any reduction in the hours when the pools could be used as a cooling center. Mr. DePasquale said that the pools are run by the DCR and they have a difficult time with student lifeguards return to school. The City is in discussions to financially help keep the pools open longer. Mr. DePasquale said that it appears to be a problem with staffing. Vice Mayor Devereux commented that the DCR is raising the wage for lifeguards to \$15 per hour.

Ms. Peterson said that the Gold Star Pool is being built with solar heating so it could be open much longer. She said that staff is still an issue but it has the capacity to be kept open from late spring to early fall.

Councillor Kelley noted that his son has no interest in life guarding. He stated that it is underestimated how bad it will get and about the cost. He stated that this is complex and will be a big operational budget item. He stated that communication will be crucial.

Vice Mayor Devereux said that she agrees with Councillor Kelley that if the \$ 2 million is just for the Amelia Earhart study, the project will cost a lot more. She said that she feels that Fresh Pond is the elephant in the room in its current place as the City's water supply. She said that the cost of protecting this kind of asset is perhaps that we may not need to make because we are protecting other assets. She said that the barriers could have impacts on the areas on the other side of them. She said that she is concerned about how we decide what our tolerance for risk is. She said that we are making the best projections with regular updates of the plan but someone has to pick how tolerant we are. She said that we need to be forthright about what we are putting in to accommodate and what it will and will not do. She said that green infrastructure is important in the near term. She said that we need to figure out how to fund programs for homeowners. She said that she sees a lot of cars parking in the depiction of the Alewife area. She said as it looks, the cars would be flooded. She said that this is another area of risk. She said that the City has the challenge of having a transient population which needs the information as well. She said that we will need more pools if everyone is using them. She said that the city received a citizens zoning petition which will be discussed in the coming weeks.

Councillor Carlone said that libraries could be used as cooling places. He stated that it might make us look at facilities differently as we build. He said that the City can always use more community space.

Councillor Zondervan said that there are different strategies in the report. He stated that regarding community building, the challenge is how do we make that happen. What are real mechanisms that will bring about the community that we are looking for. Mr. Bolduc said that they are attracted to the idea of resilience hubs. They can also work with CHA, and build messages into their programs to continuously reach out.

Ms. Sasportas stated that working with existing networks and partners will be beneficial. They are part of a regional emergency preparedness coalition. One of the upcoming programs is to provide training outreach on continuity of operation plans for social service agencies. She said that working

through the existing programming and services allows them to integrate with many different populations.

Ms. Farooq stated that this has to be built into the capacity of existing networks. The transient population are students and the universities are involved and at the table with the City. They are preparing their own preparedness plan and communications with students. Councillor Zondervan stated that there are challenging social justice issues in the Alewife area. The more this area can be cleaned up, the less impact. Mr. Lipson commented that municipalities can be part of the process but there are no local laws relating to the cleanup of sites. Mr. Bolduc noted that with the development process there is an opportunity to get sites cleaned up if the sites are sealed and if there is no contamination. If there are activities on the site it needs to be cleaned up and the developers are absorbing the costs. Councillor Zondervan spoke about transportation and evacuation and how will people get to safety when there is a disaster. Mr. Bolduc stated that the MBTA is doing their own vulnerability assessments as well as Mass DOT. He said that the city is engaged with both agencies. He said that the state is emphasizing resiliency for all state agencies. He is hopeful that the transportation agencies will act to make their systems more resilient. He said that given the duration of flooding that is being projected, sheltering in place strategies could be effective. He said that we must think about communication systems and the ability to give medical assistance.

Councillor Simmons asked about the Alewife map. She asked about the Alewife and the Port Plan. Mr. Bolduc said that they are not entirely different. In the Port, they are looking at a smaller area of a lot of dense, multi-family residential homes with vulnerable populations including the CHA. There are flooding problems but they do not face storm surge risk. There is precipitation flooding. He said that they are in different watersheds. He said that ideally, they would do a plan for every neighborhood but they thought they would learn enough from doing these two neighborhoods for a good citywide plan. Councillor Simmons talked about environmental injustice. She said that every plan should talk about environmental justice. She said that we have to train people who are not as well-versed to participate.

Ms. Rasmussen said that the efforts to engage with the youth has dramatically increased. They have just submitted a grant application with the idea of engaging high school level students both in the classroom as well as outside. The grant would reach 300 students. She said that this is critical and the school population is very diverse. Mr. Bolduc noted his agreement. Ms. Sasportas said that they are doing outreach in the Port with narratives that would assemble profiles of concerns of residents in the neighborhood. She said that part of the project would be youth-led. They work with the Men's' Task Force and the Men of Color Task Force.

Vice Mayor Devereux said that the redevelopment of Tobin School presents us with an opportunity to build the model for climate change, education and resiliency. She said that on June 11 there will be a City Council roundtable to receive an update on Envision Cambridge.

Councillor Siddiqui said that she is awaiting a report on Jerry's Pond.

Councilor Carlone said that if a site is fenced off because it is environmentally dangerous, and there is a flood, the chemicals in the water will be all over the region and that is why the City must address the fenced off areas. Councillor Carlone said that insurance companies will be the catalyst of many improvements.

Vice Mayor Devereux thanked all for their attendance.

The meeting adjourned at 7:42 PM on motion of Vice Mayor Devereux.