



ClimateCARE

Climate: Community Action for Resilience through Engagement
in East Boston, Massachusetts



submitted by

NOAH

Neighborhood of Affordable Housing Inc.
East Boston, Massachusetts



to the

Kresge Foundation

Climate Resilience and Urban Opportunity Initiative



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ClimateCARE EXECUTIVE SUMMARY

NOAH, anchored in the diversity of East Boston and committed to the engagement and empowerment of neighborhood residents, is uniquely positioned to leverage the *Opportunity* presented by the convergence of City and State climate adaptation planning efforts and renewable energy programs, to deliver on the *Promise* of climate resilience for East Boston—the people and the place.

With the support of Kresge's *Climate Resilience and Urban Opportunity Initiative* Planning Grant, NOAH demonstrated its capacity to convene key City and agency stakeholders. Through our Supported Community Participatory Planning model to educate and engage East Boston residents across many demographic dimensions in the climate resilience conversation, we strengthened relationships and identified new partners who will push for climate resilience actionable plans.

We are now ready to move forward with **ClimateCARE**, a three-part program in which we will a) strengthen our community engagement, b) partner with the City to advance its Climate Action Plan, and c) convene agency stakeholders in an Adaptation Planning Working Group which will facilitate coordinated, actionable climate resilience plans. We will also leverage NOAH's deep engagement with and trust within the community to promote and support household action to reduce energy use and to prepare for future climate impacts.

Climate is emerging as a defining issue of our time. Climate Resilience, including adaptation, mitigation and social equity/cohesion, requires building a shared vision and plan for action while sustaining the vision and the momentum over the long haul. With Kresge Foundation support, we are ready for this challenge.

I. OVERVIEW

East Boston is a hustling and bustling immigrant community with almost two hundred years of proud urban history. We are also a collection of islands, joined by fill, sitting in the crosshairs of climate impact, and we are a diverse, overburdened community that will suffer disproportionately if individuals and institutions have not prepared to be resilient. NOAH is ideally positioned to deliver on the promise of significant improvements in climate resilience through its proven methods of engagement; through partnership with the City to implement mitigation and adaptation programs; and, through building a process for stakeholder collaboration in building climate adaptation plans in East Boston.

The Opportunity

This is a unique time: state agencies, municipalities, research centers and others have conducted studies, completed risk assessments, and developed preliminary action plans. Some of the key efforts relevant to our work include the City of Boston's *Climate Action Plan* update, the *Building Resilience in Boston* report, the *Living with Water* project and report, and the risk assessments completed by Massport (operator of Logan International Airport in East Boston), the Boston Water and Sewer Commission, and the state department of transportation (MassDOT). Now the City and the agencies are ready to move to action plans

and implementation, and fortunately, both need and want community input and support. During the Planning phase of this project we learned over and over again that the City and the agencies highly valued NOAH's ability to convene community representatives and host constructive conversations about the risks and their preliminary plans. This is exactly what we hoped would happen.

East Boston is a special place: now a peninsula in the Boston Harbor, it is a high impact zone for climate change. The population is diverse, multi-lingual, and largely lower income, and to date has had limited awareness of the problems and concerns of climate change. In the face of these challenges, NOAH has a long history of community engagement, and is a trusted partner, known for serving and bringing together the many constituents of the East Boston community. At this time, in this place, NOAH has the *potential to influence* the climate adaptation and mitigation plans and implementation strategies of key agencies and the City. By strengthening and expanding its proven community engagement tools and its capacity to convene, NOAH can help shape agency plans to meet the needs of residents, and by partnership with the City we can increase the success of the City of Boston's Climate Action Plan in East Boston.

The Approach

NOAH's ClimateCARE project has three main elements: a) strengthening and expanding community engagement, b) partnering with the City of Boston to develop effective programs and models for selected elements of the Climate Action Plan, and c) convening and facilitation of an Adaptation Planning Working Group.

Community Engagement. Our community's long history of hard-won, cross-sector, negotiated mitigation planning with Logan International Airport informs our 'supported' approach to what would otherwise be mismatched power dynamics, but this supported engagement is so vital to the success of agency and community joint ventures. With 27 years in community development and environmental justice advocacy, NOAH understands the lives, challenges and language of our constituency in general and in regard to the specifics of climate resiliency. ClimateCARE's framework of supported formats, expanded partnerships and a community-wide "Climate Canvass" are strong responses to the critical need to engage very busy and burdened residents.

With trust and respect given and received within our process, and the essential and valuable exchange of values and information which occurs, our supported meeting, research and engagements have and will continue to feed regional climate change planning efforts. The same qualities, at the individual scale, inform our Climate Comforts concept. We have trust and belief in our residents: we know they care about local/regional/global issues, that they will choose clean progress over dirty when possible and economically feasible, and that they will engage where and when they can juggle work and family life. Not only do we bring constituents as 'Delegates' into planning to learn what they want, we also bring them in to ask for their advice. This will be the case with our partnership goals within the City's Climate Action Plan. Here we will use our engagement framework to improve energy efficiency programs and encourage action to mitigate and adapt. The same will be true for the Adaptation Planning Working Group.

Boston Climate Action Plan Implementation. The promise of our collaborative approach working with municipal partners is about building and sustaining trust, then attaining

mutually beneficial goals. By partnering with the City to create and deliver programs and services that will achieve Boston's Climate Action Plan goals, we will be building trust between City and community stakeholders, repositioning City and utility energy efficiency programs and activating community and government in unison.

Adaptation Planning Working Group Bringing agencies together as they build out their action plans while bringing community voices, ideas and concerns to the planning process is the goal of the new Adaptation Planning Work Group (APWG). This multidisciplinary, inter-agency planning, steering and advocacy group will feature collaborative dialogue and planning in order to increase the consistency of the action plans in East Boston and ensure that community concerns and priorities are reflected in the plans. By bringing planners from relevant agencies together to share data, compare plans and collaborate, and by working shoulder to shoulder with our careful and representative Delegate support system, the APWG will be able to deliver well-vetted recommendations and advocacy positions on complex, difficult to achieve climate change issues.

The Promise

The promise of ClimateCARE at this time of opportunity is increased climate resiliency: creating personal and shared action, increasing climate preparedness in LMI communities, engaging and including minority peoples in responding to civic educational issues, and engendering participation in mitigation and adaptation programs will be the real long-term 'win' for East Boston.

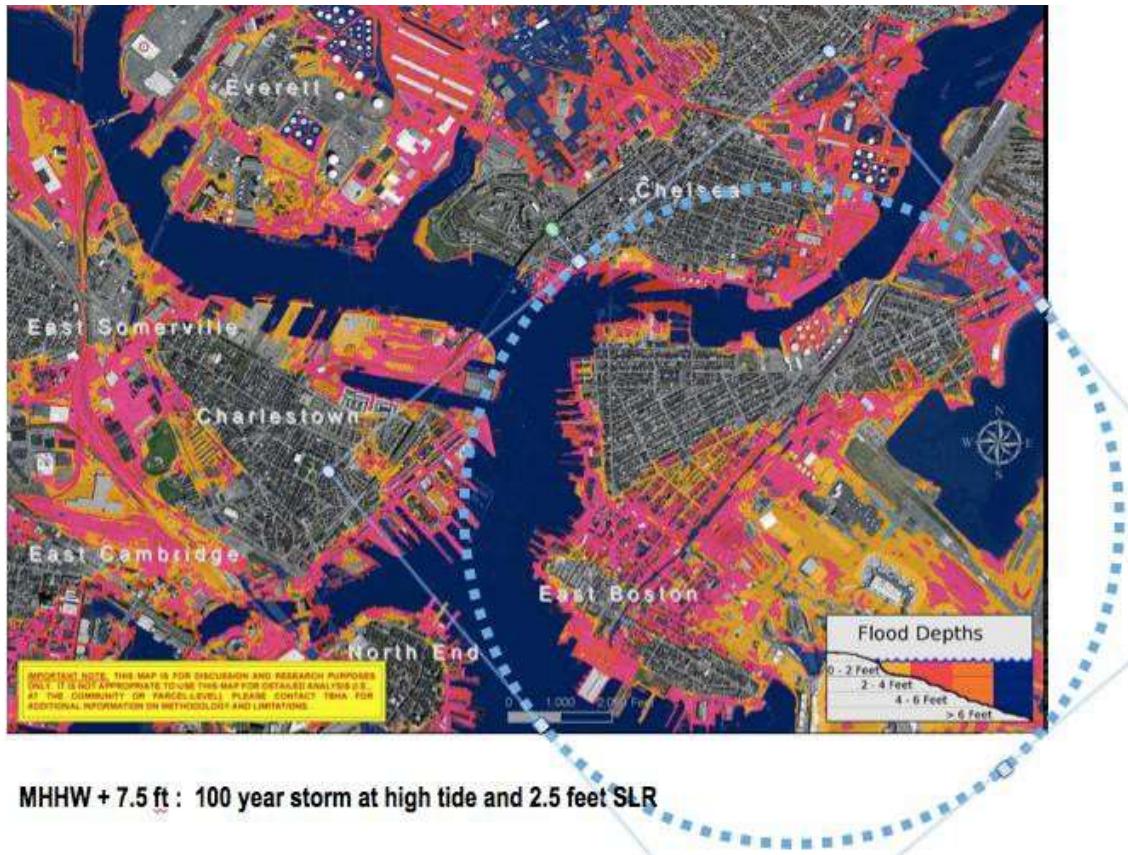
Together, stakeholders in climate resiliency will improve regional and local resiliency, aiming for successful, practical implementation of Boston Climate Action Plan programs and resulting in agency action plans that have consistency for East Boston implementation, that have community input and reflect community priorities, and that achieve community buy-in for implementation;

In the following sections we will lay out the need, the opportunity, our approach and our expected outcomes in more detail.

II. THE NEED

Climate Awareness and Action Planning

Recognition of the Risks. In the past five years, East Boston has missed four 100-year flooding events (defined as an event that has a 1% likelihood of happening or being exceeded in a given year) only because storm surges hit several hours off high tide. The map below shows the estimated inundation from this type of storm striking at high tide, if there were a 2.5 feet of sea level rise, which will occur sometime after mid-century.



Sea levels are rising and extreme precipitation and high temperature weather events are projected to become more frequent. As shown in the map, large parts of East Boston will be impacted.

Some of the barriers and issues that affect our ability to be climate resilient include lack of green and gray infrastructure for flood and drainage management, inability of households to prevent sanitary sewer backups, vulnerable underground roads and public transportation systems, lags in updating aging energy infrastructure, and municipal/state limits to funding for systemic changes. At the same time, the political will of our leaders and institutions and the willingness of residents to accept taxes or fees to make needed changes is still in the development stages.

Sea Level rise is not the only concern. As reported in the May 2015 ULI TAP report completed as part of our Supported Community Planning Process Workshop Series this year:

“Models project that sea-level rise alone will not lead to flooding in the neighborhood before 2050. However, when coupled with a major storm (defined as five or more feet of storm surge) at high tide, models project that half or more of the neighborhood could experience flooding much sooner - even soon. By 2100 projections become much more dire, with a major storm putting nearly the entire neighborhood underwater. Projected increases in precipitation and intensity of rainfall will also necessitate a closer look at storm water management. The Boston Water and Sewer Commission found

that annual rainfall could rise from the current 52 inches per year to 65 inches per year by 2100.”

Extreme weather is perhaps a more present threat. With the number of days with temperatures reaching over 90 degrees per year in this region predicted to rise from an average of 13 over recent years to as many as 30 – 60 per year by 2050 (MAPC) and with increased winter precipitation wreaking havoc on the region with increasing frequency.

Realities of East Boston

As we have conveyed, East Boston is an energetic, strong, culturally diverse, immigrant gateway community of 41,000 people. Here are some useful statistics. We are inextricably linked to Logan International Airport, which caters to over 1,000 flights and 90,000 passengers daily! Every day, 65,000 MBTA riders pass through on the Blue and Silver MBTA subway lines, and over 87,000 cars utilize three underwater tunnels to and from the rest of the City of Boston. Thus, regional economic effects are critical to our understanding of the need to be resilient, and bring the agencies that own and operate this essential infrastructure into the East Boston resilience dialogue.

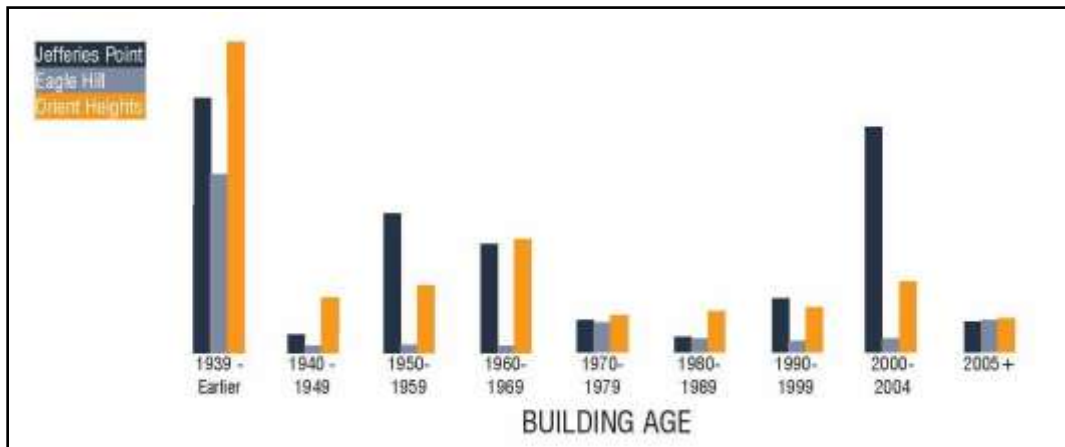
At the same time, social and demographic characteristics, geographic, linguistic and social isolation with a high level of poverty make it challenging for local residents to participate in this dialogue. Some metrics include:

- Per capita income is only 66% of the City of Boston's average (\$22,400)
- 17% of households in East Boston live below the poverty level
- 55% do not speak English as their native language.

In previous work on climate issues, NOAH found significant community knowledge deficits regarding climate science and management. For example, fewer than 10% of residents surveyed indicating awareness of climate change or sea-level rise concerns. To expand resident awareness, there is a need for trusted sources of information, in a multi-lingual, culturally sensitive setting, with basic supports such as childcare to enable resident participation. This is why we developed the Supported Community Planning Process (SCPP).

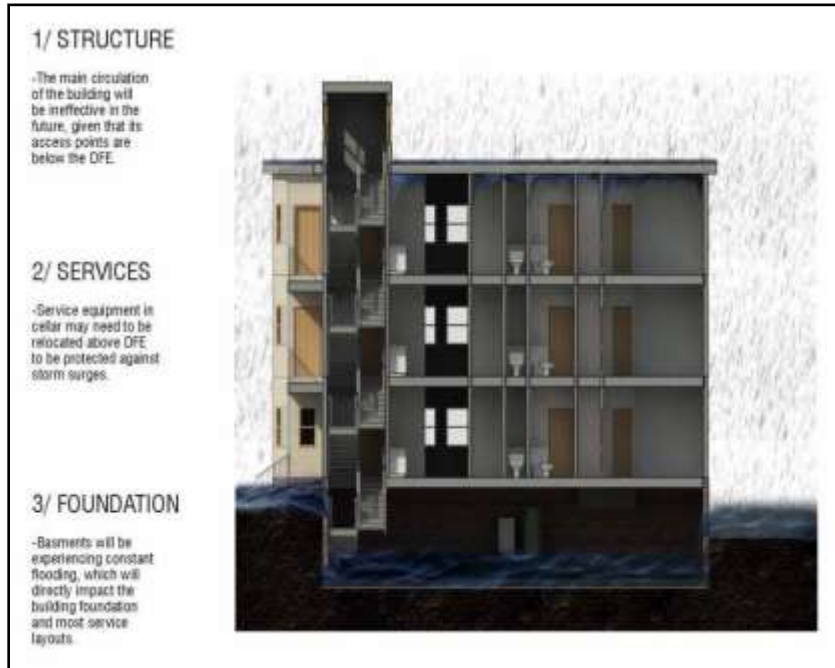
The East Boston housing stock is vulnerable to sea level rise and stronger storms. 70% of the housing stock was built before 1920. Buildings are mostly wooden structures, many with 1 – 4 units. Exhibit 1 shows the housing stock by neighborhood.

Exhibit 1: East Boston Housing Stock Age



The tenure mix is comprised of 10,890 rental and 4,398 ownership units. During the Planning Grant Phase, Huxtable Fellows, graduate students from the Boston Architectural College, conducted assessments of the housing stock and analyzed some of the most glaring housing vulnerabilities. Exhibit 2 indicates some of these in a typical, attached East Boston, 1920s-era, three-decker house. Their work documented a critical need for mitigation and adaptation measures to be widely implemented throughout East Boston.

Exhibit 2: Vulnerabilities



East Boston's aging housing stock puts our at-risk population further at risk. Many here are not able to invest in expensive clean and green technologies, nor are they able to afford growing costs for heating and air conditioning. Often living in cramped housing, affected by pollution from Logan airport and three tunnels, and bearing the trauma of immigration and poverty, community residents also suffer disproportionately with negative health impacts such as asthma, cardiac and respiratory disease. Living week to week and with limited social safety nets, the impacts of a natural disaster on this population would be devastating. Hence our need to work together to alleviate these life-threatening risks.

These household climate and community-wide challenges are what NOAH will seek to address in our ClimateCARE program.

III. OPPORTUNITY

The Planning Phase has confirmed that NOAH can mobilize and empower the East Boston community to take action and engage in climate resilience and engage with the City and the infrastructure agencies that provide services in East Boston. We see two opportunities to engage with the City and State agencies to influence action plans and programs. The first is through direct participation with the City of Boston in the development and implementation of elements of the updated Climate Action Plan. The second is to be the convening force for the many agencies with climate resilience interests in East Boston, to increase the coordination between their plans, and to ensure community input.

A. Implementation of Boston’s Climate Action Plan

Nowhere more clearly than in the City’s recent 2014 Climate Action Plan (CAP) Update, are local and community adaptation policies, priorities and goals set out. The specific, targeted goals set out in that plan are considered nationally as among the most aggressive of their kind. As stated in the City’s ambitious plan, they have goals for: integrating preparedness into all aspects of planning, review, and regulation, coordinating preparedness efforts regionally and with state and federal governments, and increasing Engagement within the community. ClimateCARE is an action plan designed to lock in on those goals and deliver specific, measurable outcomes both for this plan. At the same time, Boston is embarking on its first master plan in fifty years—Imagine Boston 2030, and it has been stated in many arenas that they are looking to NOAH’s model for community engagement to inform this process.

The City’s Greenovate program, located in the Office of Environment, Energy and Open Spaces, is leading the Climate Action Plan implementation effort. NOAH has developed strong working relationships with the Greenovate staff. As a key point of entry into the Climate Action Plan, NOAH staff member Magdalena Ayed is serving as one of two community voices on the Boston CAP update Steering Committee. She has gotten to know and interacted with many of Boston’s leading climate change professionals and businesspeople through that role. The City of Boston’s Office of Environment, Energy and Open Spaces has been an active partner and sponsor of our work, first through its former chief, Brian Swett, who recommended NOAH as a lead for this project, and now through new chief, Austin Blackmon, who recently said, “We are looking to NOAH model as an example as to how to work with our neighborhoods” through the City’s 2030 Master Planning process and the City’s Climate Change work.

The Climate Action Plan is comprehensive. In Table 1, we have pulled out elements that are our initial targets for program implementation partnerships with the City. For these goals from the City’s plan, we have noted possible program goals that we can target with ClimateCARE.

Table 1: Excerpts from Boston Climate Action Plan Update

Community Engagement Related Boston Climate Action Plan Goal Example				
Goal	Policy	How ClimateCARE Addresses the goal	Targeted Policy Goal	Timeline

2.33	Improve and expand neighborhood engagement	Through our Partnership, with access to our SCPPs, the APWG, and the Climate Canvass as well as to other elements of our direct benefit framework, the city will have field-leading and adaptive community engagement resources at their disposal	As Core Partners, the City will assist in the establishment of engagement target percentages and measurement techniques	2016, 2017
Greenhouse Gas Reduction Related Boston Climate Action Plan Update Goal Alignment Example				
Goal	Policy	How ClimateCARE Addresses the goal	Targeted Policy Goal	Timeline
2.11	Expand Energy Efficiency programs	Partner with Renew Boston staff Use SCPP Workshops to identify resident centered opportunities to improve Renew Boston Energy site visits, consultations and retrofits	City to set neighborhood specific GHG reduction target goal for ClimateCARE program collaboration in program a. contact b. lead generation and c. 'deal close'	2016
2.14	Accelerate participation & expand scope of energy audit	Include Renew Boston Programs on Climate Comforts Continuum Promote Renew Boston Programming through Climate Canvass Support Renew Boston Programming as prescribed	City to set monthly capacity limit as needed to handle leads generated by Climate Canvass	2017
2.17	Promote programs in multiple languages	Our multi-lingual Climate Canvass will use smart-phone database technology with prepurchased Experian or similar database to develop linguistic targeting	City to partner in development of and provide printed materials and extended live translation support in English, Spanish, Italian, Portuguese Arabic, and Vietnamese	2016
Climate Preparedness Related Boston Climate Action Plan Goal Alignment Example				
Goal	Policy	How ClimateCARE Addresses the goal	Targeted Policy Goal	Timeline
1.2	Coordinate preparedness efforts regionally and with state and federal governments	The AWPG will provide a regular convenings in which all of the target stakeholders in this goal will participate in focused resiliency planning work. As a core partner, the City's planning needs will be central.	City to co-chair the APWG	2016

B. Engage, Inform and Influence Agency Action Plans

Through our previous work on Climate Resiliency and Preparedness enhanced by the nine-month Kresge Planning Phase, we are fortunate to possess strong and growing 'points of entry' (PoE) into the City of Boston and major climate change departments and agencies. As discussed previously, the PoE into the various planning activities of the City is the Chief of the City of Boston's Energy, Environment, and Open Space Department, now Mr. Austin Blackmon and previously, Mr. Brian Swett (now the Director of Resilience for Cities for ARUP). Both Austin, and previously Brian, have been easy leaders with whom to work. They have been accessible, collaborative and welcoming – fine examples for other climate change leaders.

The major infrastructure agencies in East Boston are Massport, Boston Water and Sewer Commission (BWSC), MassDOT, the Massachusetts Bay Transportation Authority (MBTA), and the gas and electric utilities. Over the past year and a half, we have identified Points of Entry for most of them including staff members who have participated in our three Planning Phase Workshops. In support of moving toward implementation, we have received commitment and support letters from the City, BWSC, and Massport. Given our existing relations with the MBTA and the utilities (e.g. Dr. Kirshen is meeting in early October with the MBTA to discuss their long-range capital plan), and the participation of utilities in previous NOAH workshops, we also expect to obtain their participation as we continue our

efforts. We have received a number of letters of support and commitments to participate, included as supplemental materials.

PoEs are not only knowing an agency exists or knowing some staff in these critical agencies, they are knowing what they have or have not done, the specific responsibilities of those agencies and what we intend to do to affect their specific realm. For example, we know that some agencies have carried out initial ‘vulnerability assessments’ of their East Boston assets, while some have in-depth plans and others are only in the talking or early study phase. With the exception of Massport and MassDOT however, none of the organizations have *specific* plans for *East Boston*, which actually is an opportunity for us in the Implementation Phase and with our proposed new coordinating entity, the Adaptation Planning Working Group (APWG). For other organizations, the past adaptation planning efforts in East Boston sponsored first by US NOAA followed by the Kresge Planning Phase grant, have been the first adaptation planning efforts they have ever undertaken in East Boston. Because of our own efforts, with Kresge support and wide publicity supplied by ULI, most of the recognized agencies charged with climate change analyses and protections, now see NOAA as **the** lead convener for adaptation in East Boston. Table 2, below, lists the agencies with which we have worked and which we are targeting as key coordinating players in our soon to be formed, APWG.

Table 2. Key Infrastructure Agency Adaptation Planning

Agency	Policy	EB Assets	Plan Status	Target Actions	Timeline
City of Boston	Boston Climate Action Plan Update Building Resilience in Boston (BRB)	Social and physical	Goals set	<ul style="list-style-type: none"> ✓ Partner with APWG ✓ Liaison with the Green Ribbon Commission and the city's energy, environment and open Spaces staff Plan implementation strategies for CAP and BRB suggestions and achieve goals Engage in BRA planning for IB2030 Pilot CAP goal strategies	Done 2016 2016 2016 2016
Boston Water and Sewer Commission	(BWSC)To recommend strategies, design standards, and climate change data collection and analyses for sewer and storm drains, facilities, and structures for flooding resilience , and climate change”	Stormwater sewerage, water supply	Assessment and Partial plan	<ul style="list-style-type: none"> ✓ Partner with APWG ✓ Join APWG data share Engage in joint agency study process Plan on-bill financing for backflow preventer program Update East Boston Specific Combined Sewer Outflow closure plan and schedule	Done Done 2016 2016 2017
MassPort	Preparing Massport for the inevitable future changes in climate ...(to) help protect our airport and maritime investments by minimizing infrastructure failure, reducing operations and maintenance costs, ..improving the safety of our users	Logan Airport	Assessment and Partial plan	<ul style="list-style-type: none"> ✓ Partner with APWG ✓ Join APWG data share Engage in joint agency study process	Done Done 2016
	MassDOT Evaluating statewide transportation assets to adapt to predicted climate- related hazards ...(to) prevent infrastructure failure, improve reliability, reduce operations and maintenance costs, improve safety, and protect investments.	Tunnels and Roads	Assessment	<ul style="list-style-type: none"> ✓ Partner with APWG ✓ Join APWG data share Engage in joint agency study process Contribute flood modeling capabilities	Done Done 2016 2016

MBTA	In progress	Tunnels and infrastructure	In progress	Partner with APWG Join APWG data share Engage in joint agency study process	Done Done 2016
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As mentioned earlier, APWG is specifically designed, and will be staffed up and organized with community input to pull all the climate change agencies and departments into a cohesive whole where proposed policies and plans can be shared and effectively coordinated prior to capital planning. APWG is a key element of our work. The beauty of it is that by working closely and openly together, **no** agency should be able to go off on their own and then make ineffectual plans or investments in East Boston. If plans are made for East Boston then, they will be vetted by collaborating agencies with community input and implemented after thorough review. Without Kresge funds and the ability to staff and pull our key advisors and staff together, it is quite unlikely we could do this on our own at NOAA. In addition, the APWG is a model for other neighborhoods and agencies to utilize as Climate Change and Resiliency planning comes more center stage.

When we talk about specific agency plans, we note Massport has taken the lead - and with good reason. They operate Logan International Airport, which is set low into Boston Harbor and highly vulnerable to future storm surges. Massport is a major economic driver for the region. Thousands of people work there; many take the underground subway or one of three tunnels under the Harbor. Those people have to have safe, reliable ways to get to work under the most challenging circumstances. Massport has identified many of their vulnerabilities and has made preliminary plans to protect runways, terminals, equipment and the nearly 10,000 people who staff this enormous enterprise. They have been in dialogue with the MBTA about what its plans are since the "T" as it is known, must protect underground stations in East Boston and downtown Boston. We must be sure our own community, which houses perhaps 1,000 Massport workers, can get to work to serve the community. Specifically, they are preparing higher elevations for new infrastructure (runways, terminals, parking and regional transportation elements) and they have plans to block off some of the presently threatening flood pathways into the airport; one of which is through a low-lying former rail yard, now a rail trail Greenway dividing the Maverick/Jeffries residential sections of East Boston.

MassDOT, which has done some terrific mapping (a key to understanding future sea-level rise threats), has presented some floodwall methods to protect its roadway, tunnel and bridge assets in East Boston. These are not only important for East Boston but also for the region as EB is like a funnel for commuters, and travelers. We do not yet know how these may affect other agencies or future plans but we did discover in one of our spring Workshops that their methodology for predicting the future conflicted with Boston Water and Sewer estimates. That March Workshop was an 'Aha!' moment. We knew then there was a critical need for agencies to share data and their draft plans with each other. If one agency estimates a 2.5 foot rise by 2050 and another a 4' rise and they execute their plans independently, the 2.5 rise might be correct, it may well not! In that case, dialogue would be essential to coordinating plans especially if the 2.5 rise were to be wrong and inadequate. Knowing where to place specific drainage pipes and sea-level rise barriers we also found to be in dispute among our collaborating agencies. It will be our goal through the APWG to ID these inter-agency discrepancies (and probably others) so as to eliminate conflicting data and focus on coordinated plans which protect the community.

Now is the time to move on to detailed planning. While some agencies may work together and compare and coordinate plans, not all of them do, and their plans are only beginning to address concerns and implementation timelines for East Boston. Further study, planning and coordination is surely needed, but so is Action! By taking action, driven by the high-quality interaction with community members that the well-planned and structured Planning Phase SSCP Workshops enabled, City and State agency staff have deepened their knowledge and further welcomed resident collaboration. They have expressed the desire for an on-going agency/community planning coordination process. With this positive attitude prevailing, we are poised for success.

In the sections that follow, we will describe our approach to the three key elements of our plan.

IV. ACTION PLAN & WORKPLAN

Resiliency needs to be built person-to-person, house to house, street by street and in every community. Community resiliency needs must also be heard in government and agency offices. To partner effectively with agencies and move our community toward meaningful resiliency outcomes, we need tools. With the support of the Kresge Planning Phase Grant, we have built a framework to deliver direct benefit and address the obstacles that block low-income and minority people from participation. Going forward, our direct benefits approach will close the disparities between planners' and community knowledge through better-distributed information on energy efficiency, flood risk and climate impact reduction. Through the tools we have developed in our Planning work, we can deliver a comprehensive Program--Climate: **Community Action for Resilience through Engagement**, or ClimateCARE, with a promise of integrated and equitable climate planning with greater social cohesion.

To do this, NOAH will need to increase its capacity by adding staff, bringing technical expertise into the team and establishing strong partnerships with agencies and organizations with comparable commitments to climate resilience. Our ClimateCARE team will include:

- A Resiliency Coordinator, a new NOAH staff position
- NOAH Community Building and Environment Director and Community Organizer focused climate change positions
- Climate Canvass workforce training, management and remuneration strategies

We will continue to invest heavily in essential Partnerships with old friends and new ones alike as we convene the smartest people in Boston's surging resilience field. Our growing list of partners includes:

- 1) City of Boston
- 2) Urban Land Institute Boston/New England Chapter
- 3) Boston Society of Architects/BSA Foundation/Community Design Resource Center
- 4) Boston Architectural College, Gateway Program
- 5) UMass-Boston
- 6) Massport
- 7) MBTA
- 8) Boston Water and Sewer
- 9) Coastal Zone Management

Based on our experience during the Planning Grant phase, we fully expect ClimateCARE to attract a widening circle of partners. This year, as last, we are positioned to forge new and valuable partnerships with leading universities. Knowledge partners such as MIT, RISD, Mass Art, Harvard School of Business and Boston University have signaled interest in adding their skills to ours.

In the sections that follow, we will describe our approach to the three key elements of our plan.

A. Community Engagement

Through ClimateCARE we will build from our proven methods of community engagement: expanding the Supported Community Planning Process, increasing our community outreach through surveys and canvasses, and targeting some of our youth activities to climate resilience. Community Engagement serves our purposes in several ways: as a means to increase knowledge of and action for climate resilience within our community; as a method for implementing Climate Action Plan programs and services in East Boston; and as an essential element of the Adaptation Planning Working Group.

We will continue to build on proven SCPP model. We will use this as a two-way communication tool—providing community audiences for discussion of agency plans as they are being developed, and bringing the community to the agencies when agencies are seeking community participation.

Canvassing has been a proven, effective method for reaching our community. In ClimateCARE we will expand this tool as a means to support implementation of Climate Action Plan programs and services. Our plan is to employ up to 50 local residents as “Climate Canvassers” and to implement a multi-year “Climate Canvass” program to (a) educate residents on current and future climate risks, (b) offer information, support and resources for personal climate adaptation and (c) promote low GHG building technologies and solutions at a continuum of price points to promote personal climate resilience. As a perfect entry point for our partners' climate preparedness materials, programs and ideas, our door-to-door canvass and support will help build trust and understanding and increased participation. The Climate Canvass will address many of the Boston Climate Action Plan's objectives. Further, through the training, development and support of the canvassing corps, we will advance resiliency planning in Boston by leveraging increased community-based knowledge, expertise and leadership, leading to expanded availability and personalization of resiliency planning initiatives.

B. Boston Climate Action Plan Partnership

As noted in the Opportunities section, we have identified elements of the Climate Action Plan related to the City's GHG reduction and climate preparedness goals as the best opportunities for partnership with the City. Through ClimateCARE we will work to leverage existing energy efficiency programs such as Renew Boston, and work collaboratively to develop messaging, programs and services to increase climate. We will work closely with the Renew Boston staff to increase the uptake in weatherization and energy efficiency audits. We will strengthen our existing relationships with the Renew Boston staff and use the SPCC to define current roadblocks to low household audit rates and help Renew Boston find solutions and more customer leads. Our door-to-door ‘Climate Canvass’ roll-out will be a perfect entry point for the delivery of communications related to climate preparedness will provide useful research, data and feedback to City departments. Our Partnership approach will offer issue-specific household, and community level focus-group style feedback to public sector-led energy audit and retrofit programming. The insights and potential program adjustments which grow from our close SCPP examination and resident collaboration will create success in measurably increasing requests for service through lead generation via our door to door, multi-lingual Climate Canvass and through enhanced targeting and customer service environment

In Year 1, we will develop a partnership framework, and together with the City determine the program and service elements that ClimateCARE is best positioned to work with the City to implement. We will establish metrics for measuring impact. In Years 2 and 3 we will pilot, and then implement programs and communication methods through the SCPP and the Climate Canvass.

Our collaboration will extend the opportunity for City program managers and staff to create custom targeting approaches and set specific energy efficiency targets for a variety of their many goals. The ClimateCARE program will provide the financial, staff and engagement resources to create the strongest inroads into the community and promote the greatest possible change.

C. Adaptation Planning Working Group

The Adaptation Planning Working Group (APWG) will enable us to leverage the skills and experience of Dr. Paul Kirshen, an internationally known and respected climate scientist from the University of Massachusetts. He has brought its network, ideas and support to our team, providing powerful research tools, and scientific understanding where it has been most sorely needed. Dr. Kirshen has been a very active participant, supporter and networker on our behalf. He knows ALL the local climate change agencies and departments. He reaches out to the agencies climate change staffers and recruits their involvement. He reads their plans and identifies points of difference where collaborations would be most effective.

Paul will help organize and lead our new Adaptation Planning Working Group (APWG). With the APWG, we can support the household and neighborhood scales as well as regional climate change agencies; we can convene, share and advocate with climate change agencies which are all doing research on and making some kind of plans to protect their East Boston assets. We can also help the City implement the Boston CAP goals. With multi-agency participants and East Boston resident involvement, APWG is a bridge-building entity designed to be a safe, practical and central organizing locus of our efforts.

Through the Adaptation Planning Working Group, the establishment of an active information and input exchange forum will be based at NOAA. The APWG will work in coordination with all the other adaptation activities taking place in metro Boston. Local adaptation experts will be drawn from the engineering, architecture, landscape architecture, urban planning, climate science, academic, and financial communities

The APWG will utilize expert consultants to test and refine adaptation plans – involving strategies that use natural systems or fully or partially mimic natural systems (i.e., green infrastructure) as their performance is still uncertain. The capabilities of the APWG through its membership will allow for a series of pilot design projects to be developed to inform the larger East Boston planning efforts and form a base of knowledge and experience for the industry locally and beyond. The APWG process will be building and strengthening public sector agency relationships to bring the East Boston residents' interests to the tables of public sector planning efforts.

As an example of the potential impact of the APWG, the approach to adaptation that to date has received the most support and interest by all stakeholders is the construction of a series of floodwalls or berms in low-lying coastal areas through which storm surge enter East Boston. Since a storm surge could happen any time, some walls are needed now and could

be expanded over time; other walls are not needed immediately and could be built as climate changes and sea levels rise in decades ahead. Integral to this plan is also flood proofing or elevating other assets that would not be protected by the walls. Moving some assets and activities to other locations and controlled flooding of some areas are also parts of the plan. Future planning will also examine the possible roles of green infrastructure such as Living Shorelines and gray/green hybrids in adaptation in East Boston and effective evacuation and return plans. The APWG will support testing concepts, and with our other partners will be a forum for conducting charrettes and community workshops to develop implementation strategies more fully.

Our team's collective resources will be formidable, allowing ClimateCARE to produce more benefit together than we would be able to do alone. In just one example, if an Urban Design Workshop led by our partners from BSA could collaborate with support from MassDoT, to apply DOT's powerful new modeling tools for vulnerability to proposed adaptation flood control scenarios, determining how inland flooding would change under different adaptation surface condition, elevation change scenarios it would be of immense benefit to the community, the City and the agencies alike.

Our Supported Community Planning Process (SCPP) and Adaptation Planning Working Group (APWG) will operate in parallel, but will intersect regularly to bring diverse residents and professional partners together for informed collaborations designed to create equitable and effective Climate Resiliency. These thoughtful and dynamic entities also have the ability and collective power to leverage the political system to recommend and forge climate change management strategies and to invest in needed climate infrastructure programs, policies and projects.

D. Emerging Partnerships and Collaborations

Already, we have a strong group of core participating partners and a slate of remarkable benefits, which has and will continue to flow from our productive partnership model:

- **BAC Gateway projects:** co-sponsored by City of Boston and NOAA, the "Gateway" project will design and evaluate resiliency recommendations.
- **CDRC Summer Fellowship:** The 2016 summer fellowship will focus a university collaboration on ClimateCARE design solutions in a competitive application process covering architecture, landscape architecture, engineering, urban design, planning, art and graphic design.
- **Architecture Boston Expo (ABX) Workshops:** the largest regional building industry conference in the country, (organized by ClimateCARE partner BSA) ABX will include a workshop on the East Boston ULI Tap/Kresge climate resiliency and sea level rise planning process.
- **BSA Urban Design Workshops:** brings interdisciplinary teams of design professionals together to work on real Boston-area issues. The model can be tailored to create proposals for critical sites in East Boston.
- **Boston Living with Water:** Fifty teams from seven countries and including over 340 individuals submitted proposals in this International Design Competition to imagine a more resilient Boston in the year 2100. East Boston, with our partnerships and engagement provides the opportunity to apply these design ideas.

The NOAA climate resiliency team is involved in all these activities; for example, Paul Kirshen is co-lead of the GRC scientific review and has contributed to the CAP and many of the inter-agency plans. Kim Vermeer is an oft-used consultant for non-profits and NeighborWorks groups. Gretchen Schneider, of the BSA Foundation is a thought-leader, initiator and gatherer in the professional realm.

WORKPLAN/TIMEFRAME

The Workplan lays out a simple timeline for how we will approach the elements of the Action Plan. Here, we hope to convey how we will deliver the Outcomes and Promises made in this proposal by attacking the Need and Opportunities outlined and Approaches described.

2016

In 2016, we will continue to assemble our team, framework, tools and strategic partnerships, working at multiple scales to bring Boston's considerable resources together. We will assemble, test and pilot the ClimateCARE program as it begins its work in:

Community Engagement

- Deepen and expand our community engagement
- Explore improvements to evacuation, sheltering, communications planning, advocacy, and flood wall design
- Refine and pilot the Climate Comforts program
- Design and Pilot a 1000 household Climate Canvass
- Design and Pilot Basement Clean-out Program

Boston's Climate Action Plan Partnership

- Define goals and metrics for use in partnership with the City of Boston in our work to achieve the specific goals set out in the City of Boston's Climate Change Action Plan
- Formalize our role as a leading pilot for the Imagine Boston 2030 Master Planning Process

Adaptation Planning Work Group

- Design and form the Adaptation Planning Work Group, beginning to convene and mobilize agency and community stakeholders around the important advocacy challenges ahead
- Develop and Pilot Community Process for Neighborhood Flood Control System Design
- Develop scenarios of present and future climate threats
- Organize academic and intellectual resources to develop adaptation plans

2017

In 2017, the ClimateCARE program will be completed and rolled out on a community scale:

Community Engagement

- The Community Canvass begins
- Contractor Training Program Designed to support Climate Comforts Initiatives

Boston's Climate Action Plan Partnership

- Begin Pilot of Energy Audit Uptake Promotion

Adaptation Planning Work Group

- Create Draft Flood Control Plan

- Plans tested by engineering consultants for performance feasibility and adjusted if necessary.
- Methods for financing and permitting developed
- Develop advocacy positions for community climate impact adaptation and mitigation

2018 Plan

In 2018, ClimateCARE will continue to deepen our trust-centered relationships, advocacy and multi-scale initiatives. We will analyze our results, adjust planning and allocate resources as needed.

Community Engagement

- We will conduct our Community Canvass Round II
- We will adjust our Climate Comforts Initiatives

Boston's Climate Action Plan Partnership

- Roll out full Energy Audit Uptake Promotion Program

Adaptation Planning Work Group

- Develop Regional Draft Flood Control Plan
 - Continue advocacy positions for community climate impact adaptation and mitigation, financing, etc.

V. PROMISE: IMPACT

The impact from ClimateCARE be will that East Boston will be much better prepared for climate change and be more climate resilient. We define Resiliency in terms of targeted gains in: awareness of risk, availability of information, uptake of low GHG building technologies, lead generation / sign-on of energy efficiency and conservation programs, design, permitting and financing of extreme precipitation and coastal surge flood management and inclusive public discussion of climate resiliency.

Our goal is to partner with the City to implement the Climate Action Plan: to educate and empower residents for action to reduce their individual, household and small business impacts on climate change by adopting practices and measures to reduce greenhouse gas emissions.

Our goal at the end of the three year process to have comprehensive, integrated agency action plans that include local and household actions such as elevation and flood proofing, and East Boston community and neighborhood actions that are implemented over time as the climate changes. We will prepare to manage the current and increasing threats over time of coastal flooding, extreme precipitation, and extreme high temperatures using a combination of structural and nonstructural measures, and green and gray infrastructure. This will all be done in coordination with the City and the many agencies and developers also carrying out adaptation activities, so costs are minimized and co-benefits obtained. Some metrics we will use to evaluate our work include the following:

Goal 1: Strengthen and Expand Community Engagement:

- Development of a pipeline of 50+ diverse, informed and engaged community leaders, 10 of whom are capable of representing community concerns in the public realm such as speaking at public Workshops about ClimateCARE, attending meetings with elected and appointed officials, testifying before City and State Climate Change hearings.
- Fund and allocate resources to the Community Delegate mechanism so that there is consistency in attendance and leadership for future Resiliency Workshops held in the neighborhood
- In 2016, develop an outreach plan in order to reach 200 members of the EB Chamber of Commerce and EB Main Streets small business communities.
- 1,000 residents and 100 small businesses, especially in the low-lying flood plain in Central/Maverick Squares, will receive appropriate education and materials in order to gain awareness of sea-level rise risks in the near term (winter 2016) and will have City and community approved actions they can take to be prepared for storm surges as soon as this coming winter.
- Approximately 30% percent of households and businesses in the designated flood plain will take action to remove toxins from basements and protect heating equipment in 2016. There will be percentage increases in years 2 and 3.

Goal 2: Partner with the City of Boston:

- At least 25% of households in FEMA flood plain offer a positive lead for the City (and utility) rebate programs
- NOAH staff are re-appointed to serve on the City's Climate Action Plan
- In 2016, City Dept. of Environment and Energy publically holds up NOAH SCPP and our APWG processes as resident participation models for the entire City
- By 2017, there will be mention of and inclusion of East Boston priorities in City (and regional agency CC assessment and CC action) Resiliency plans. These may include plans for re-zoning, mitigation responses such as flood surge, barrier walls, MBTA emergency plans, and preparation of capital budgets of agencies
- The City, in partnership with our own Kresge funded team, develops a Pilot Resiliency Planning process in an LMI community outside of East Boston in collaboration with the Chief of Environment and Energy, Austin Blackmon.

Goal 3: Convene and Facilitate the APWG, Adaptation Planning and Working Group:

- At the outset of 2016, at a (hoped for announcement of a Kresge award), we will also hold a press conference in East Boston to announce the formation of the APWG, its Mission to protect the people and property of East Boston, its goals, its inter-agency composition, including four community members, as well as the support for APWG from the City of Boston (the Mayor will be invited).
- Four Community Delegates from the four sections of East Boston accept placements on the new APWG. In the winter of 2016, NOAH will advertise for an experienced environmental academic advocate to become our new Resiliency Coordinator
- By the spring of 2016, the NOAH Resiliency Coordinator and the APWG will have assembled, read and analyzed all the known assessments and workplans from 'top tier' agencies.
- East Boston Supported Community Delegates attend APWG and report back to SCPP members, likely on quarterly basis; and, Delegates share EB concerns with the APWG in order to coordinate concerns and interests.

VI. CONCLUSION

NOAH's ClimateCARE program will enable a culture change for East Boston toward a new urban environmentalism, with deep and broad engagement, so that that people are taking action within their power, individually and collectively to increase our climate resilience.

Through the Implementation Phase, we have the extraordinary opportunity to work especially closely with the Mayor and the City of Boston to protect the physical assets and human capital in our vulnerable neighborhood. We are now in the fortunate position to be closely engaged with the City and its planning, particularly as its Climate Change Action Plan evolves and the Mayor's 2030 Master Planning Process unfolds. Implementation of the APWG will enable NOAH to take its convening and consensus—building expertise to a new level

Lastly, NOAH is not working alone in this exciting venture. We have the advantage of having attracted a wide array of professional partners and agency representatives who share our passion and interest in serving the people of East Boston. We, and our neighborhood, are indebted to them for graciously and willingly sharing their expertise, their connections and their time with our SCPP and Workshops. Our experts will continue with us on this Implementation Phase journey with the benefits accruing to East Boston residents and Climate Change activity and advocacy everywhere.