RESILIENT MEDFORD

RESILIENCE HUBS

City of Medford
June 2020

Acknowledgements

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Organizations: Medford Health Matters; Medford Housing Authority

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Organizations: Cambridge Health Alliance; Medford Health Matters; Medford Housing Authority; MelroseWakefield Healthcare - Women, Infants and Children (WIC); Mystic Valley Elder Services; Tufts University; Walnut Street Center; Wayside Youth and Family Services; West Medford Community Center

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Authors: Andreanne Breton-Carbonneau, Climate, Health and Equity Coordinator, and Alexa Griffiths, Student Intern from Tufts University
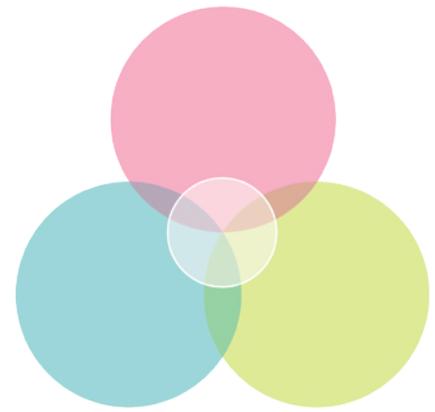
Graphic Design: Jess Choi

Consultants from Kim Lundgren Associates provided support and guidance throughout this process, as well as writing Task 3 of this assessment.

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executive summary

Purpose

The Resilient Medford Resilience Hubs project aims to assess Medford's ability to withstand climate events from a public health perspective by three main tasks. This project integrates community resilience into climate preparedness by promoting adaptation through combined efforts of residents, local organizations and local government. This project places social justice principles, including **racial equity and health equity**, at the forefront to support the health and well-being of all Medford residents.
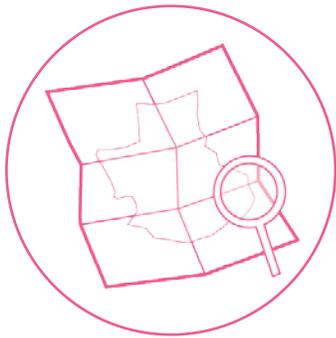
Task 1 Where

Justly identify priority service areas for a pilot Resilience Hub based on neighborhood resources, sensitivity to climate change, and adaptive capacity.
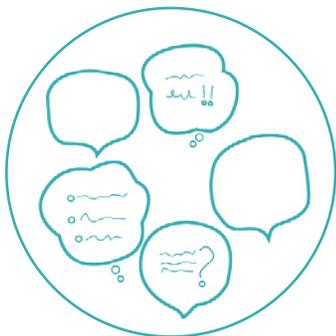
Task 2 What

- A) Evaluate adaptability of vulnerable residents and gauge community provider's readiness to climate impacts.
- B) Listen to residents on resilience concerns to amplify the voices of residents facing social inequities. Engage providers in discussions to understand resilient programming that would support their constituents
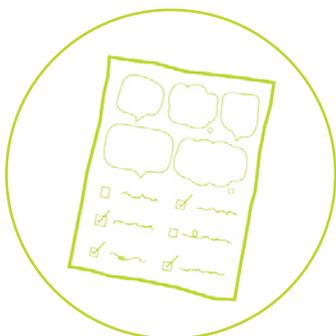
Task 3 How

Explore areas within the identified service areas that may accommodate resilient programming, share the requirements of a Resilience Hub site and recommendations to advance equitable community resilience.

Task 1 Where

Medford-based community resources were mapped by precinct to geographically determine areas with limited community services. This information was cross-referenced with areas in Medford with known **physical and social vulnerability**.

- Areas were prioritized recognizing historically under-resourced areas or community groups, including areas with lower income, communities of color, and immigrant communities who speak languages other than English.
- Precincts 1-1 (Glenwood), 5-1 and 5-2 (South Medford), and 7-2, (Wellington) were identified as the strongest candidates for a Resilience Hub.

Task 2 What

A) Numbers & Figures

Resident Adaptive Capacity

The City of Medford established the "R U OK?" program to respond to residents' needs during the COVID-19 pandemic, which informed the city of resident ability to adapt. The "Request for Resident Services" form evaluated residents needs for services during this emergency.

- Most requests were for food (47.0%) or medication and personal supplies (32.8%), emphasizing the importance of improving our local food and health systems.
- Most requests were submitted by a city employee (30.2%) or by an "R U OK?" volunteer (32.7%) on behalf of a resident, suggesting that many residents who are not connected to city employees or programs may not be aware of available resources.
- Majority of check-in call respondents reported receiving support from family (77%) or friends and neighbors (32%).
- Broadcast news (43%) and word of mouth (20%) were the main channels by which respondents stayed informed of COVID-19 news and available resources.

- Findings that Medford seniors access essential services by support of family, friends and neighbors (49%) or by themselves in person (37%) indicate the value of person-to-person outreach.

Organizational Readiness Evaluation

For many local service providers, climate change and climate change preparedness are not within the **principles** of their organization, as the issue is "not yet on the radar" among **leadership**.

- Have **operations** to protect their services during emergencies through Emergency Preparedness Plans.
- Ultimately looked to local governments to provide climate and emergency preparedness **policy and legislation** for the region.

All providers felt that their constituents **trust** their organization in emergencies, using multiple modes of **community engagement** to reach their constituents.

- Have a strong understanding of **space**, both the physical location of their services and where information about their offered services is located.

B) Conversations & Discussions

Resident Community Conversation

Participants expressed that they feel safe in familiar spaces where there are people with common interests and values.

- Public spaces feel more comfortable for everyone when there is true diversity.
- Haitian participants noted **racism as a critical barrier** to feeling supported, through tokenism, "English-only " initiatives, "color blindness," and general attitudes towards the Haitian community.

Participants cited **communication barriers** to feeling prepared and supported by their community.

- Some reported City Hall as the only known place to access local information.
- Participants who speak languages other than English expressed significant challenges accessing information at City Hall due to limited language support.

Desired **resilient programming** shared by participants centered around fostering trusting relationships and promoting accessible information and resources.

Organizational Interviews & "Big Table" Discussions

Discussions on **building trusting relationships** focused on a commitment to communication and shifting outreach practices.

- Develop intentional policies that exercise active inclusion measures and anti-racism.

Organizational **concerns for the impacts of climate change** centered on themes of social justice and accessibility, emphasizing meaningful collaboration between providers and City Hall to better support residents before, during, and after disasters.

Desired **resilient programming** focused on expanding public services, such as public transportation and affordable housing.

- Language services and support.
- Activities for all ages and abilities at parks and open spaces.
- Wellness programs, education programs, and emergency preparedness programs.

Organizations shared a **vision for a Resilience Hubs** that centered on 4 themes:

1. Social connection, as a multi-use gathering center involving communities of diverse backgrounds.
2. Community engagement, as a center for community organizing and supporting community-driven policies.
3. Information access, as a centralized communications center to share information on local resources.
4. Collaborative response, as an opportunity to integrate regional efforts in supporting community resilience.

Task 3 | How

Resilience Hubs are trusted, regularly utilized, and accessible. Commercial (non-industrial) facilities of ≥5,000 ft^2 were listed with their functionality.

- List refined to include sites that could potentially meet all five elements of an ideal Resilience Hub (below).
- Cross-referenced with priority areas and environmental justice (EJ) neighborhoods.
- Preliminary analysis: only one candidate facility (St. Clement Church) was identified in a priority area, though not located in the EJ neighborhood section.

1. **Programming**: offer a variety of services that promote community well-being and preparedness. Programs determined based on community interests.
2. **Structure**: support year-round activities and emergency situations. Site must be in good condition, ideally not in a flood zone, and have kitchen amenities to provide food before, during, and after emergencies.
3. **Power**: ensure reliable backup power during a disruption. Backup power systems should be both cost effective and sustainable.
4. **Communications**: ensure communication systems are functioning within and outside the service area, especially during disruptions and recovery.
5. **Operations**: ensure appropriate personnel and processes are in place to operate the facility before, during, and after emergencies.

Next Steps

Despite interest in Resilience Hubs, it is clear that next steps must first lay a foundation of trust between community and City Hall through inclusive outreach and an active commitment from the city to practice **anti-racism**. Further planning is also needed to organize Resilience Hub coordination, communications, and operations.

1. Invest in community engagement by hiring a team of local organizers of color who are already well established within their communities to spearhead a Community Resilience Task Force involved in designing resilient policies.
2. Develop a coalition of community providers within the Task Force to devise processes that enhance partnerships and communication and strategize a co-location system to co-host services.
3. Involve city offices and departments in coordinating city-run services and promoting equitable community resilience, requiring a commitment to anti-racist policies.

introduction

The City of Medford's[1] population is 57,771 residents, with a median household income of $92,363. Despite an 18.6% growth in median income from 2014-2018, the poverty rate has remained stable at 9-10%. In 2018, Medford's racial-ethnic makeup was 75.0% White, 10.6% Asian, 9.4% Black, and 5.3% Hispanic/Latino. However, the poverty rate was 8.3% White, 16.5% Asian, 8.0% Black and 17.4% Hispanic/Latino. 21.4% of Medford residents were foreign-born and 28.6% spoke a first language other than English.

MIT's Living Wage Calculator for 2017 shows that a family of four, with two adults working full-time, must collectively earn $76,784 annually to afford basic living expenses in Middlesex County. Unfortunately, this "living wage" was not attained by 31.6% of Medford families whose income was less than $75,000 in 2018.
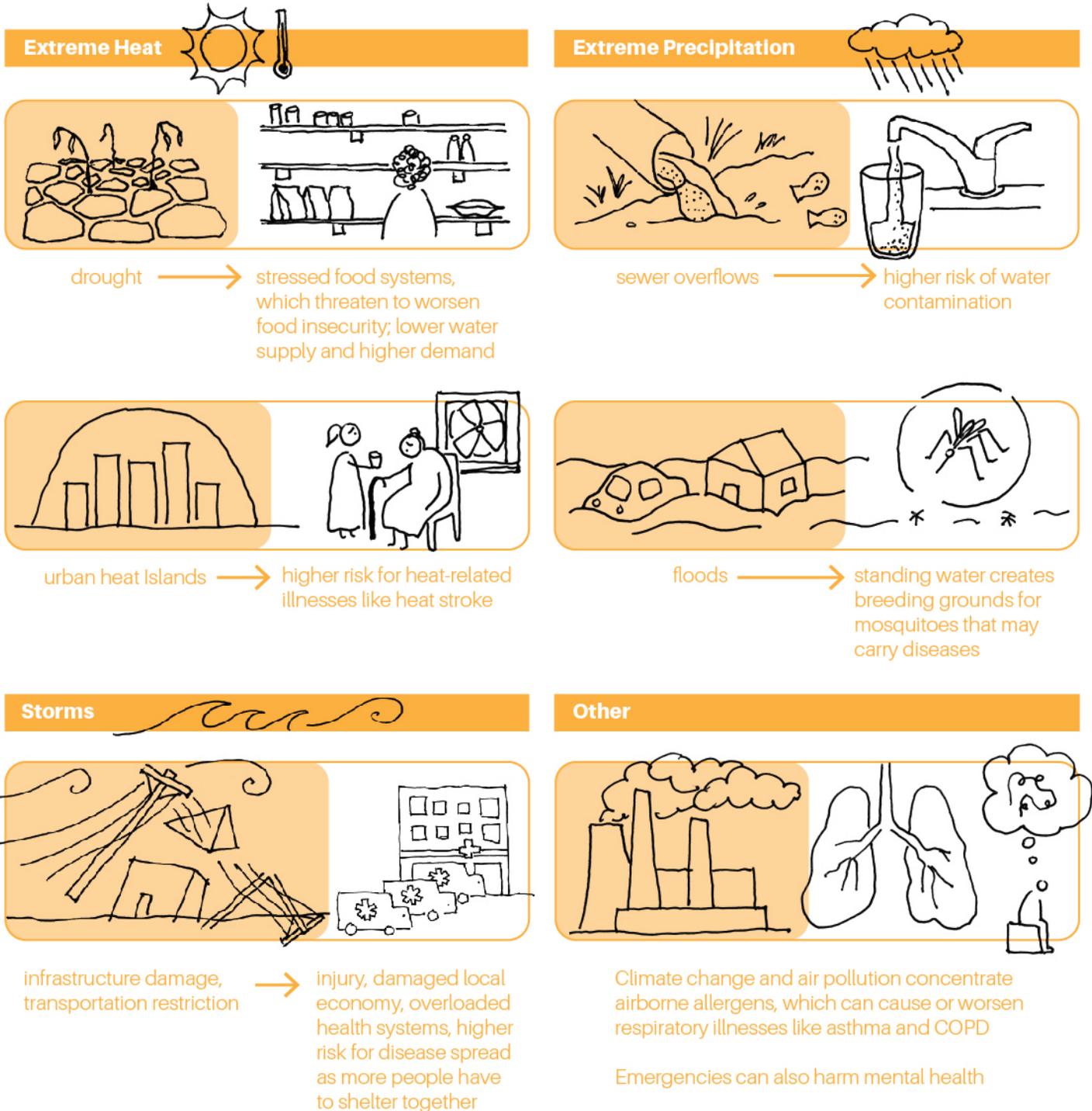
[1] *US Census 2014-2018 American Community Survey 5-year survey*

Climate Change, Public Health, & Community Resilience

Though the physical threats of climate change are well understood, less is shared on how extreme weather affects public health as illustrated below.

*For companion video in English and other languages, **visit this YouTube page***

Extreme Heat

drought ➔ stressed food systems, which threaten to worsen food insecurity; lower water supply and higher demand

urban heat Islands ➔ higher risk for heat-related illnesses like heat stroke

Extreme Precipitation

sewer overflows ➔ higher risk of water contamination

floods ➔ standing water creates breeding grounds for mosquitoes that may carry diseases

Storms

infrastructure damage, transportation restriction ➔ injury, damaged local economy, overloaded health systems, higher risk for disease spread as more people have to shelter together

Other

Climate change and air pollution concentrate airborne allergens, which can cause or worsen respiratory illnesses like asthma and COPD

Emergencies can also harm mental health

Legend

▢ Physical Impacts ◯ Public Health Impacts

Though COVID-19 presents a different threat, the impacts to health and well-being from extreme weather are similar, mainly by strained health systems and weakened economies. In both, socially vulnerable groups are most affected, highlighting society's structural inequities.

Climate resilience is an **environmental justice** issue, as folks who live, work and play in America's most polluted and climate sensitive environments are commonly of low income and people of color. **Community resilience** is a framework intended to support residents' fight against structural inequities to reduce sensitivity to disasters and support resident conditions to adapt to emergencies, ultimately promoting the health and well-being of all Medford residents.

Diagram Source: Robert Wood Johnson Foundation

KEY WORDS

Community Resilience
focuses on 3 principles: connection; engagement; and adaptation.

1. Connection means to build trusting relationships among residents, organizations, and government.

2. Engagement means to engage residents more susceptible to impacts in decision-making.

3. Adaptation encourages a united community to prepare for, withstand, and recover from future emergencies.

Equity
prioritizes justice and actions to reduce the risk of communities facing social, economic, political and environmental disparities and injustice and who are equipped with fewer resources to adapt to changing conditions.

Environmental Justice
combines environmental racism, classism, and environmentalism into one framework to demand social justice, while seeking to eliminate environmental harms

ideal Resilience Hub. Image Source: http://resilience-hub.org/hubs-in-action/

Resilience Hubs

Medford Resilience Hubs will intentionally build a more just and inclusive space for all of Medford's residents, with the ambition of opposing the structural inequities of society.

Our long-term goal is to develop a Resilience Hub in Medford, which are enhanced community centers that support residents, coordinate communication, distribute resources, and reduce carbon pollution, while enhancing quality of life. Resilience Hubs are a concept by the Urban Sustainability Directors Network (USDN) meant to empower communities and increase community capacity to prepare, respond, and recover from climate change and other emergencies.

Resilience Hubs provide an opportunity to work at the intersection of community resilience, emergency management, climate change mitigation, and social equity. Resilience Hubs mainly operate as multi-use spaces with a variety of programs that build relationships, promote community preparedness, and improve residents' health and well-being. In times of emergency, these spaces may act as communication centers, distribution centers, and potential emergency shelters that are also necessary for emergency recovery.

task
where

IDENTIFY SERVICE AREAS

1

RESILIENCE HUB

task 2 what

task 3 how

Mapping Community Services & Resources

Though Medford hopes for Resilience Hubs in every neighborhood, this project must identify priority service areas for the first Resilience Hubs. As Hubs operate to serve the community, they are most needed in underserved areas.

Medford-based community resources were mapped by precinct to help geographically determine areas with limited services.
- Information was cross-referenced with known areas of **physical and social vulnerability**.
- Prioritized recognizing historically under-resourced areas or community groups, including areas with lower income, communities of color, and immigrant communities who speak languages other than English.

Vulnerability is often characterized as encompassing three dimensions:

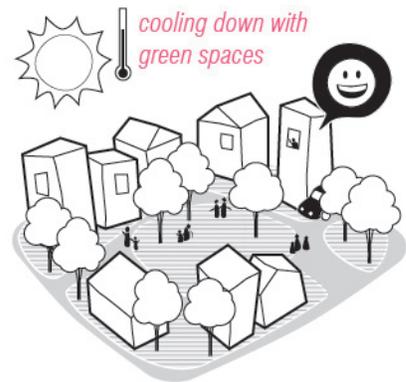**Exposure**
how close an individual/group is to a hazard
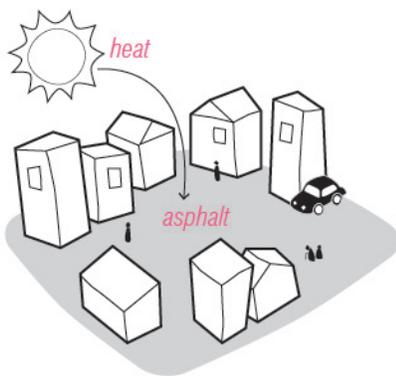
Sensitivity
pre-existing social, economic, and political conditions that affect an individual/group's access to resources or exposure to hazards

Adaptive Capacity
ability to get out of harm's way, adjust to changes, or rebuild after emergencies

heat

asphalt
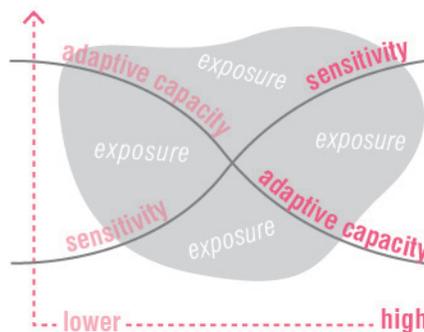
urban heat island

cooling down with green spaces

Physical Vulnerability
relates to the exposure of an individual/group to a hazard (e.g., areas with high flood risk and neighborhoods that are hotter than surrounding areas).

Social Vulnerability
relates to social indicators, such as demographics, race-ethnicity, and financial resources.

Folks with ↑ sensitivity & ↓ adaptive capacity are more susceptible to impacts = higher vulnerability

Folks with ↓ sensitivity & ↑ adaptive capacity can better tolerate impacts = lower vulnerability

Adapted from Metropolitan Area Planning Council, Climate Vulnerability in Greater Boston, MetroCommon x 2050

adaptive capacity exposure sensitivity
exposure exposure
sensitivity exposure adaptive capacity

lower -------- higher vulnerability levels -------->

A list of providers was generated from local emergency management sources[2].
- Addresses and latitude-longitude coordinates of provider locations formed a GIS map.
- Each provider category was layered over a base map of precincts and **Environmental Justice communities** (Figure 1.1).
- Climate vulnerability was indicated by the 2019 Medford **Climate Change Vulnerability Assessment**; MA Bureau of Environmental Health Climate Change Vulnerability Map; Trust for Public Land Overall Climate Smart Cities Priorities Map (Figure 1.2).

KEY WORDS

Environmental Justice Community
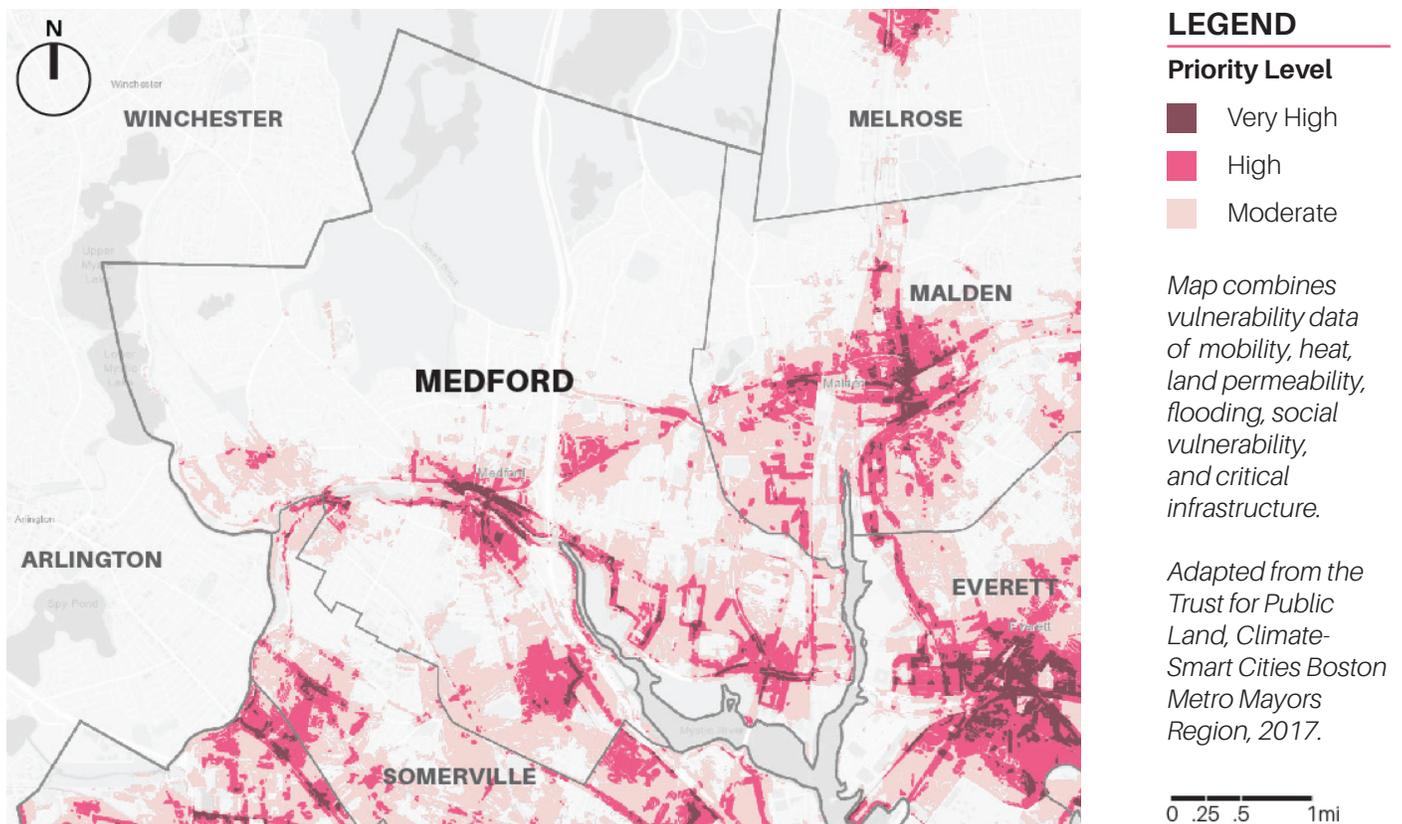In Massachusetts, a community is identified as such if any of the following are true:
- Area whose annual median household income is ≤ 65% of the statewide median
- ≥ 25% or more of the residents identify as a race other than White
- ≥ 25% of households have no one 14+ years who speaks English very well - English Isolation

**Climate Change Vulnerability Assessments**
synthesize currently available scientific information to describe the degree to which key resources, ecosystems, or other features are affected by the variability of climate or the potential changes in climate.

Figure 1.2 *Overall Climate Smart Cities Priorities Map*

LEGEND

Priority Level
- Very High
- High
- Moderate

Map combines vulnerability data of mobility, heat, land permeability, flooding, social vulnerability, and critical infrastructure.

Adapted from the Trust for Public Land, Climate-Smart Cities Boston Metro Mayors Region, 2017.

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[2] *2015 Medford Emergency Response List; 2017 Medford Comprehensive Emergency Management*

Figure 1.1 *Community Services & Resources Map*
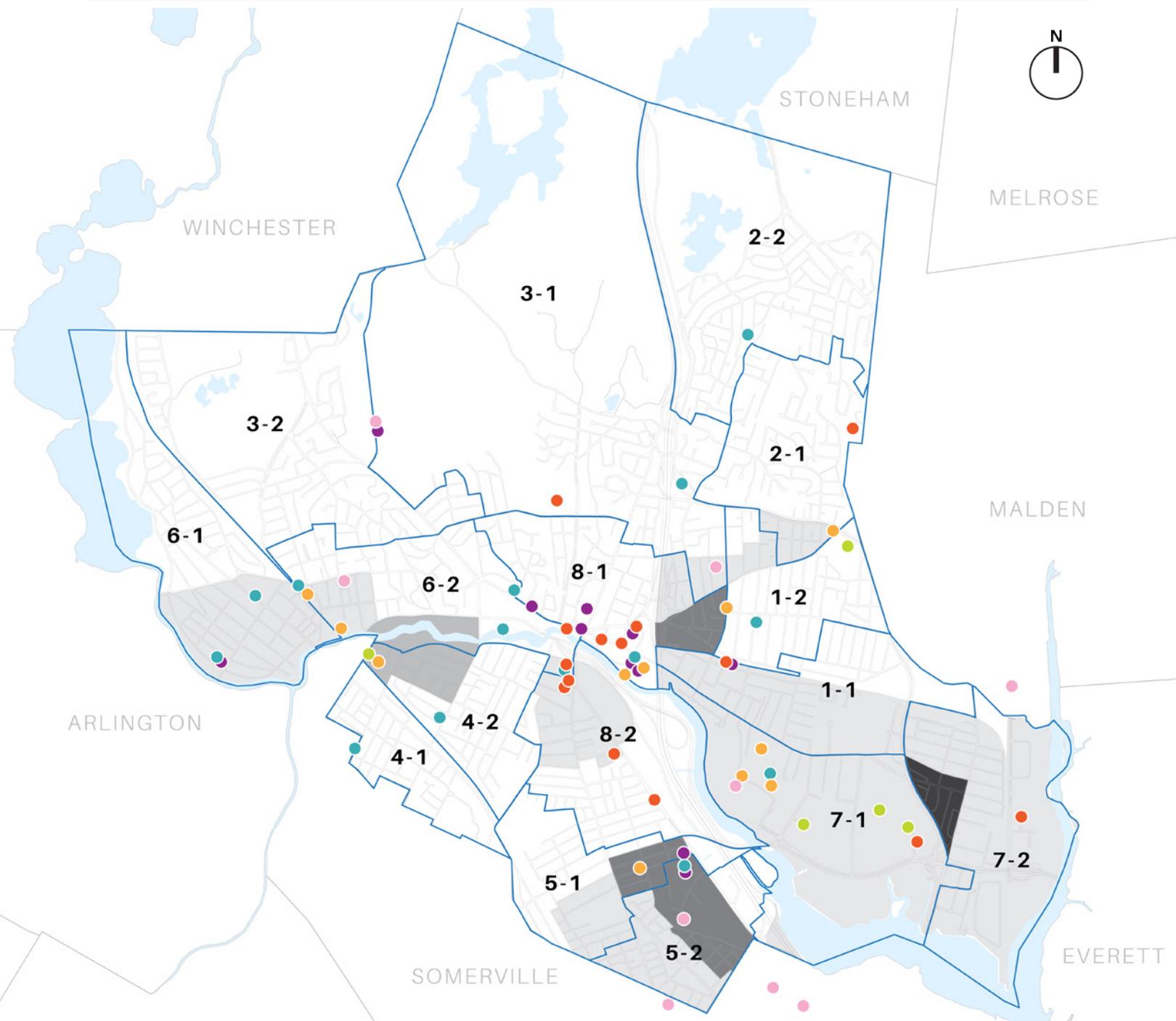
LEGEND

Community Services & Resources

- 🩷 Affordable Childcare
- 🔴 Mass Health
- 🟠 Affordable Housing
- 🟢 Supermarkets
- 🔵 Food Resources
- 🟣 Community Resources

Environmental Justice Criteria

- Minority
- Income
- Minority + Income
- Minority + English Isolation

2000 1000 0 2000 ft

Figure 1.3 *Evaluative table of Medford services by ward-precinct, cross-referencing known climate change vulnerability*

LEGEND

Community Services & Resources
- Affordable Childcare
- Mass Health
- Affordable Housing
- Supermarkets
- Food Resources
- Community Resources

Environmental Justice Criteria
- Minority
- Income
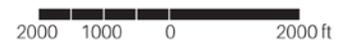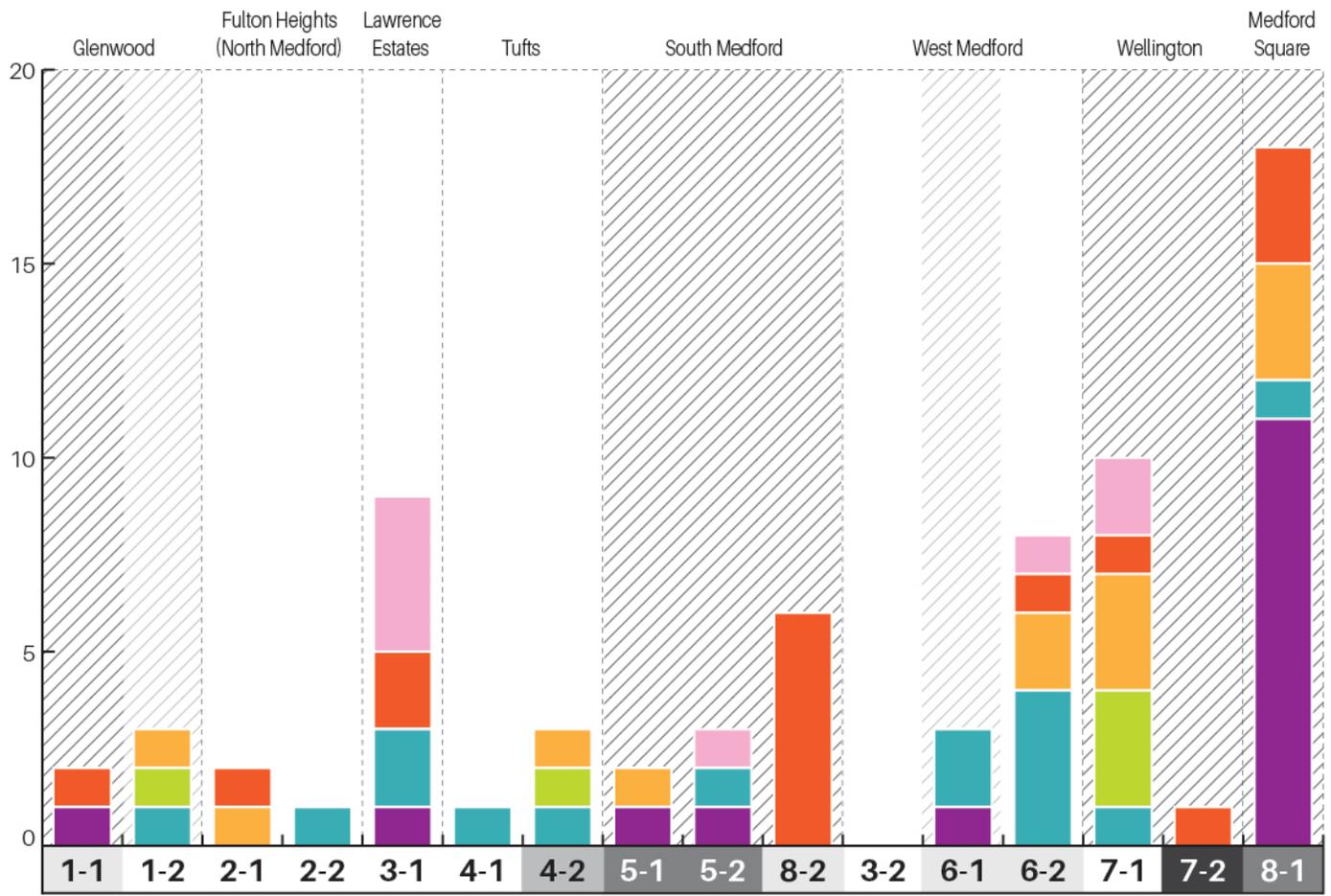- Minority + Income
- Minority + English Isolation

Communities facing reduced adaptive capacity

Climate Change Vulnerability
- Higher Sensitivity
- Highest Sensitivity

Communities facing greater levels of sensitivity

Resources Relative to Climate Sensitivity & Neighborhood Adaptive Capacity

Precinct **8-1 (Medford Square)** was previously identified as highly sensitive to climate impacts and includes a higher than average number of residents facing reduced adaptive capacity due to low income and structural inequities towards people of color. However, Medford Square also has the highest number of existing resources in the city, suggesting that added resources in Medford Square may not benefit surrounding neighborhoods already struggling to access resources in Medford.

Conversely, precincts **2-1 and 2-2 (Fulton Heights/North Medford)**, **3-1 (Lawrence Estates)**, and **4-1 and 4-2 (Tufts)** have a varying number of community resources, but were not previously identified as having high sensitivity to climate nor a significant number of residents facing reduced adaptive capacity. Though precinct **6-1 (of West Medford)** had a higher than average sensitivity to climate change with Black communities, neighboring precincts **3-1 and 6-2 (also within West Medford)** did not have higher climate sensitivity and had a higher than average number of community resources (6-2). Thus, West Medford as a whole has the potential to assist the neighborhood's adaptive capacity.

Priority Service Areas

Precincts **1-1 (Glenwood)**, **5-1 and 5-2 (South Medford)**, and **7-2 (Wellington)**, were identified as the strongest candidates for a Resilience Hub based on the limited number of existing resources and prior identification of highest sensitivity to climate change. These neighborhoods also include a higher than average number of residents facing reduced adaptive capacity from low income and structural inequities towards people of color, including immigrant residents who speak languages other than English.

task
What
ENGAGE COMMUNITY & BUILD PARTNERSHIPS

2

task 1
where

RESILIENCE HUB

task 3
how

Resident
Adaptive Capacity Evaluation

Indicators that describe adaptive capacity include: information access, social networks, and mobility; financial resources; race-ethnicity; and housing demographics.

The COVID-19 pandemic challenged emergency preparedness from global to local scales.
In March 2020, the City of Medford quickly established the "R U OK?" program to contact older residents, given their sensitivity to the virus.

- Call list of 11,000 Medford seniors was pulled from the city's voter registry.
- Program released a public **"Request for Resident Services" form**, promoted on the City's website and social media, to process requests from any Medford resident regardless of age or voter status.
    - Promoted by: Medford Public Schools, Medford Family Network, Medford Food Security Taskforce, YMCA-Mystic Community Market, West Medford Community Center, and Medford Health Matters.
- Weekly check-in calls are an opt-in service requested by seniors from the voter registry call list and the "Request for Resident Services" form.

The "R U OK?" program offered a unique opportunity to evaluate resident adaptive capacity during an emergency. Adaptive capacity was assessed from a compilation of the requested needs and residents who answered questions in their check-in calls.

The data reported do not capture the collective needs of all Medford residents.

- Many "R U OK?" respondents are seniors 60+ with voting status.
- As of June 2020, many of the outreach calls to seniors in the priority neighborhoods from Task 1 had not yet been completed.
- The "Request for Resident Services" form was not released until late April 2020 and is still being promoted.

Figure2.1 *In-Need Resident Information*
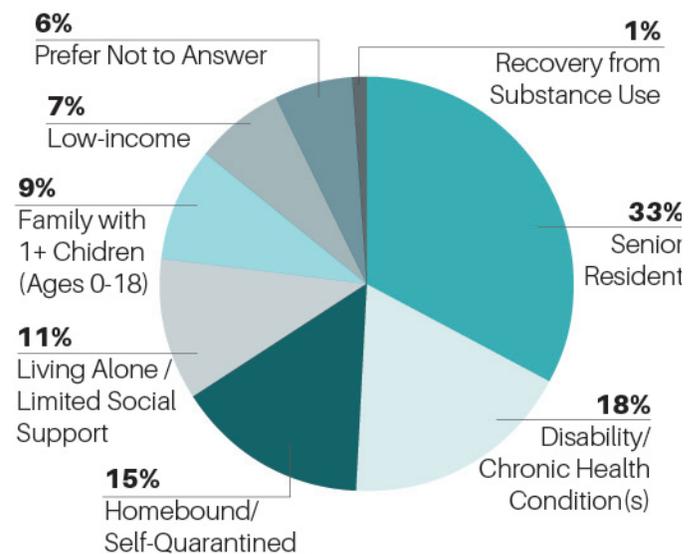
Despite these limitations, the resident data analyzed is relevant to identifying needed services from a climate vulnerable population and in understanding ways Medford can support resilience.

Resident needs during an emergency event

Requests evaluated resident needs for services related to food; medication and personal supplies; recovery from substance use; pets; support for social isolation. The intake form also allowed residents to share any other requests that were not directly offered. As of June 2020, over 300 requests for services had been submitted to the City of Medford.

Figure2.2 *Type of Service Requests from "Request for Resident Services" Form*
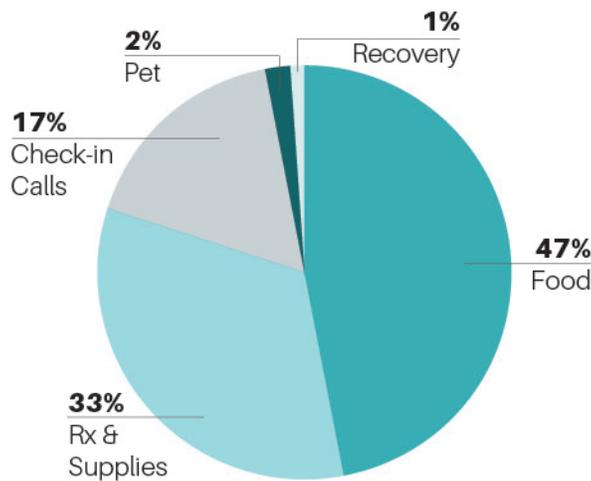
The majority of requests were for food (47%), with some requests for medication and personnel supplies (33%) and support for social isolation via check-in calls (17%). The considerable need for food and medication emphasizes the importance of improving our local food and health systems.

Figure 2.3 *Individuals submitting "Request for Resident Services" Form*
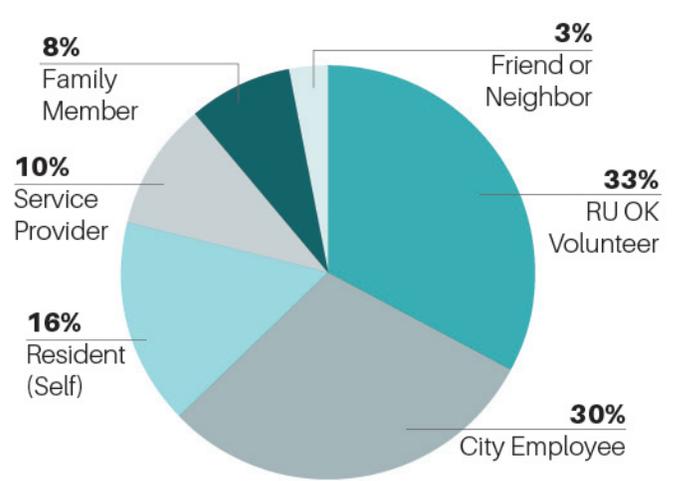
Most requests were either submitted by city staff (30%) or by an "R U OK?" volunteer (33%) on behalf of a resident. Many residents submitted on their own behalf (16%) or through a service provider that works with them (10%). These submission modes indicate that many residents who are not connected to city staff or programs may not be informed of available resources.

Residents also raised concerns regarding social connectedness, information access, and resource access, all of which are directly related to adaptive capacity.

Social Connectedness
Residents reported feeling isolated and lonely. Some residents living alone, or who were neighbors to a senior living alone, commented on having limited immediate support.

Information Access
Many respondents inquired about how to apply for public benefits, such as MassHealth, SNAP, and financial support. Residents also had COVID-19-related questions, including reopening phases and where testing sites were located.

Resource Access
With a significant demand for food services, some residents disclosed their SNAP status but were confused about benefits during COVID-19. Several residents mentioned needing transportation services to and from grocery stores. Residents voiced a need for more public services (e.g., rental and utilities assistance). Many residents also needed personal protective equipment and thermometers.

Supporting resident adaptive capacity

Check-in call questions also centered around the adaptive capacity themes of social connectedness, information access, and resource access.

Social Connectedness
360 residents called from the "R U OK?" call list who were not interested in resident services referenced being supported by family members (Appendix A). Likewise, the majority of "R U OK?" check-in call respondents reported that they received support from family (77%) and friends or neighbors (23%) (Appendix A).

- Some residents relied on community groups and agencies for information and support, including Safe Medford, the UU Church of Medford, Medford Housing Authority, Medford Senior Center, Mystic Valley Elder Services.

Information Access
- Broadcast news (43%) and word of mouth (20%) were the main channels by which check-in call respondents were informed of COVID-19 news and updates, as well as available resources.
- Some reported relying on government websites (12%) and print media (10%).

Given that this sample mainly represents older adults, these findings indicate a need for a range of media platforms to reach residents of varying technology skills. (Table 2.1)

Resource Access
The majority of check-in call respondents access essential services either through the support of family, friends and neighbors (49%) or by themselves in person (37%). Altogether, these findings signal the value of person-to-person outreach to share local information and resources. (Table 2.2)

Table 2.1
1. How are residents being informed of COVID-19 (emergency information)?
2. How are residents being informed of resources?

Sources of Information	1. Percent (%)	2. Percent (%)
Broadcast News	43	33
Word of Mouth (Friends, Family, Neighbors)	20	33
Government Website (CDC, State, City)	12	15
Newspaper/Journal	10	6
Community-based Organization	6	6
Social Media	6	6
Newspaper / Journal (online)	3	1

Table 2.2 How are residents accessing essential services?

Sources of Access to Services	Percent (%)
Support from family, friend, or neighbor (delivery/online)	49
Independently (in-person)	37
Independently (online)	9
Support from community-based organization (delivery/online)	5

Organizational
Readiness Evaluation

This readiness evaluation was a preliminary assessment of different provider's preparedness and resilience capacity and to understand in which readiness areas organizations deemed themselves more or less prepared. This evaluation was also designed to inform where the city can best support organizations in their preparedness measures.

- Over 25 local providers were contacted to partake in interviews, with 11 organizations scheduling an interview.
- Interviewed organizations all work with at least one climate vulnerable group.
- A list of participating organizations can be found in the Acknowledgments section

These 11 organizations were evaluated on 9 readiness areas, described below. The readiness evaluation for Medford community-based organizations was a lightly modified and abbreviated version of the 2014 Mississippi Valley Conservation Authority's survey for Organizational Readiness in Conservation Organizations. It should be noted that organizations of different size were evaluated together.

Areas of Organizational Readiness			Yes	No	Unsure
1		**Space** Does your organization have all of its important services in your service region mapped and described? *Organizations that answered "No" qualified that they were in the process of centralizing programmatic information, but knew where all services were located.*	6	4	1
2		**Principles** Do the overarching organizational principles of your organization enable an ongoing, iterative response to the effects of climate change? *Organizations that answered "No" qualified that climate change was simply "not yet on the radar" for organizational principles.*	7	4	0
3		**Trust** Given the possible need for rapid responses to the effects of climate change, do the communities you serve trust your organization to make the necessary decisions? *All organizations deemed that their constituents trust them to make the appropriate decisions in a climate event.*	11	0	0
4		**Community Engagement** Does your organization provide an ongoing forum to ensure effective outreach and consultation? *All organizations shared that they employ multiple techniques for community engagement. Consultation was clarified as "modes for two-way engagement".*	11	0	0
5		**Leadership** Does your organization's leadership support the need to mainstream climate change adaptation or resilience into its programs? *Similar to organizational principles, some organizations responded that climate change is not yet at the forefront for organizational leadership.*	9	1	1

Areas of Organizational Readiness		Yes	No	Unsure
6	**Partnerships** Can current organizational partnerships, that your organization has, be used to enhance your organization's capacity to adapt to the effects of climate change? *All organizations responded that they have strong community partnerships but look to City Hall as lead in local climate preparedness planning.*	11	0	0
7	**Policy and Legislation** Do the current suite of policies, for which your organization has direct responsibility, enable the mainstreaming of climate change issues into decision making? *Similar to organizational partnerships, organizations look to local governments to provide climate and emergency preparedness policy. Some organizations suggested an Emergency Task Force to jointly develop preparedness planning.*	7	0	4
8	**Knowledge Management** Does your organization have enough baseline data to support a sound decision making process to manage for the effects of climate change impacts? *Organizations that answered "No", qualified that more data can always be collected or that climate-specific data was not currently being collected. Organizations that answered "Yes", qualified that they have ample data on their constituents to apply to different emergency contexts.*	2	7	2
9	**Operations** Does your organization have appropriate mechanisms in place to protect important services in the event of a significant change in climate patterns? *Organizations that answered "No", qualified that though their organization has short-term Emergency Preparedness Plans (EPPs), their organization does not have specific plans for long-term climate change or plans for an extended emergency event. Organizations that answered "Yes", qualified that their organization has extensive EPPs and contingency plans that are regularly updated and re-evaluated.*	7	4	0

Evaluation Overview

For many local service providers, climate change and climate change preparedness are not within the **principles** of their organization, as the issue is "not yet on the radar" among **leadership**.
- Have **operations** to protect their services during emergencies through Emergency Preparedness Plans.
- Ultimately looked to local governments to provide climate and emergency preparedness **policy and legislation** for the region.

All providers felt that their constituents **trust** their organization in emergencies, using multiple modes of **community engagement** to reach their constituents.
- Have a strong understanding of **space**, both the physical location of their services and where information about their offered services is located.

Resident
Community Conversation

Medford residents were asked to provide input on community resilience in Medford. Outreach efforts for the virtual "Community Conversation" targeted residents facing social inequities. The event intended to:

- Begin resident discussions on climate and community resilience.
- For residents to leave with an understanding of how climate change is as much a social justice issue as an environmental one.

Medford Health Matters co-organized the event with the City of Medford Board of Health. Community providers and places of worship were contacted to help promote the event to their constituents via direct person-to-person outreach and email distribution.

- 40 residents of various backgrounds registered. 25% of registrants requested discussions in Haitian Creole, 10% in Portuguese, and 10% in Spanish.
- Final turnout was ~25 residents as many residents experienced difficulties connecting to the event because of technology barriers (i.e. phone call-in function by Zoom).
- A smaller group conversation with five residents from the Brazilian community in Medford was held after the virtual event.

How do we as a community build safe spaces and trusting relationships?

Cultivate belonging and encourage diversity
Event participants shared that they were drawn to spaces that are in familiar areas and convenient to access.
- Interested in spaces that support common interests and spheres of life.
- Common spaces where participants gathered, included places of worship, parks, and public spaces like libraries and schools.

Participants feel safe in spaces where there are familiar people with common values.
- Public spaces feel more comfortable for everyone when there is true diversity (in age, gender, race, language, etc.), where participants may run into residents that look like them and "speak like them", while among other residents who might not.
- Fosters an environment where participants feel welcomed and that they belong.

Address communication and information barriers
Participants find it difficult to stay informed on local updates.
- Participants with school-aged children mentioned the schools as the most common source for local news.

- Local Facebook groups are a common source for community events and updates.
- Participants more involved in civic activities mentioned the city robocall, though many participants had never heard of it.

Communication barriers were the most referenced barriers to feeling supported.
- Shared that despite living in Medford they often feel disconnected from events and updates.
- Pointed to barriers in outreach for residents who speak languages other than English, with limited internet proficiency, and with varying trust towards city officials.

Participants were most concerned about communities facing social inequities.
- Concerned about racism and the treatment of communities of color.
- Expect more concrete actions from City Hall and organizations to implement anti-racist policies.
- For COVID-19, participants are concerned about older adults, children, new mothers, and residents facing financial insecurity.

What resilient programming would you like to see in Resilience Hubs?

Opportunities for community building
Participants mentioned a welcoming gathering environment where participants want to go and community members across different backgrounds can come together.
- Interested in programs that build community, such as intergenerational and multicultural activities and exchanges.
- Development of support systems for parents and families and recreational programs for their children to enjoy.
- Expressed a need for more robust community organizing and engagement, including door-to-door outreach and regular surveys and discussions that ask residents what they want.

Accessible information and resources
The most common accessibility barrier mentioned was language services to help interpret and translate information for participants who speak languages other than English.
- Need for a centralized space to access information, both physical and digital, on community resources and reliable community updates, especially during emergencies.
- Mentioned the necessity of affordable and accessible transportation services.
- Interested in wellness programs and services for youth, parents, and residents living in social isolation.

Highlights from Haitian and Brazilian Communities

Four themes were highlighted from conversations with Haitian and Brazilian communities:

1. Limited language support and limited city outreach in other languages restrict participants who speak languages other than English. Haitian and Brazilian participants expressed, "either through negligence or a limited capacity, information is just not reaching our community".

2. Participants suggested City Hall and other agencies provide information directly to their places of community, like churches and OASIS Restaurant, and to utilize social media platforms like WhatsApp to improve communication

3. Racism was referenced as a critical barrier by Haitian participants to feeling supported by the Medford community, through tokenism, "English-only" initiatives, "colorblindness", and general attitudes towards the Haitian community. Haitian participants want representation in City Hall and local organizations.

4. Language support services were said to be crucial for Resilience Hubs. Haitian and Brazilian participants both envisioned a resource center with language capacity that connects individuals and families.

Racism was referenced as a critical barrier by Haitian participants...

KEY WORD

Anti-racism includes beliefs, actions, and policies adopted or developed to directly oppose racism and change policies, practices, or procedures that have racist effects.

Organizational
Interviews & Big Table Discussions

Local service providers were asked to share input on community resilience in Medford. Organizations participated through interviews mentioned in the above section, "Organizational Readiness Evaluations" and a two-part "Big Table" discussion series.
- Participating organizations all work with at least one climate vulnerable group.
- A list of participating organizations can be found in the Acknowledgments section.

The "Big Table" is a platform developed by Medford Health Matters. This "Big Table" series, co-organized by Medford Health Matters with the City of Medford Board of Health, invited providers to brainstorm ways to strengthen connections and build community resilience in Medford.
- Organizational networks were contacted via email to partake in the two-part series.
- 25 representatives from agencies contributed in either one or both discussion sessions.

How do we create safe spaces & build trusting relationships?

Organizations doubted the number of public spaces where immigrant families, both documented and undocumented, felt truly safe.

Organizations shared that their constituents have requested more transparent communications on project development, particularly via verbal communication and that constituents are frustrated with inconsistencies of local community engagement.
- Shift standard practices in outreach - "the onus is on us to put in the effort to build relationships in the spaces that communities consider safe"
- Outreach at schools to connect with the children of immigrants to create a reliable stream of information from child to parent
- Lean on student organizations working on climate change and social justice issues

**Promote a sense of community**
Similar to resident input, organizations voiced the importance of welcoming and comfortable public spaces - "it's not enough to just say you're 'welcome here' - we must take action to show that everyone is indeed welcome".
- Imagined a community center that would "foster a family feel" and create a "family-like safety net".

Organizations cautioned that there is no "one model" for resilience - "we need to focus on being intentional with our words and messages and less on 'perfection' and reaching out to every individual".

Some organizations discussed the inadequacy of developing formal interventions that do not respond to secondary factors of isolation and fear, adding that providers must cultivate a 'human touch'" and "center the voices of those we serve".
- Mentioned the importance of institutionalizing equitable change and taking an **anti-racist** stance.
- Promote change through prevention, intervention, and amelioration - "we have a false belief that one of those three is where we need to put our energy...but we need to respond on all three levels!".
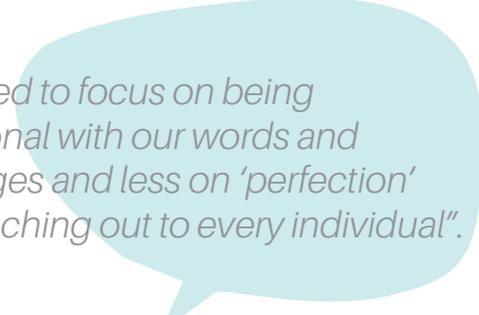
"we need to focus on being intentional with our words and messages and less on 'perfection' and reaching out to every individual".

How do we become a more prepared city?

Address concerns for the impacts of climate change
Organizations emphasized social justice implications and support for socially vulnerable populations as the biggest concern for emergencies.
- Concerned about worsening inequities and displacement of residents
- Social isolation among older adults and people with disabilities was also highlighted - "Even with trying different approaches, we're not able to reach them".

Organizations were concerned with the messaging of communications on climate change and other public health issues.
- "How do we balance truth with hope and deliver communication to reduce anxiety?"
- "How do we keep responses calm and supportive and properly address basic human needs in time of disaster?"

The impacts to public health were another concern.
- Physical impacts of flooding and extreme weather that may displace their constituents and place inequitable burdens.

- Lack of potable water and shaded areas in public spaces compound risks for heat-related illness, "especially among children and older adults, some of our most vulnerable residents".
- Increased food insecurity and the impacts to mental health

Build Capacity
Organizations highlighted the limited capacity of their agencies to organize and support folks.
- Medford needs "both a physical building and more outreach to build capacity within vulnerable groups".
- Recommended a "community organizing approach" where the city has a diverse outreach team dedicated to bringing communities of Medford together

Collaboration underlined amongst organizations as critical to building organizational capacity - "we want to do all of those practical and thoughtful preparedness steps,... but we also have to be able to coordinate and rely on our networks and collaborations."

"we want to do all of those practical and thoughtful preparedness steps,... but we also have to be able to coordinate and rely on our networks and collaborations."

How do we develop a resilient Medford?

Focus on Programming Residents Need
Though climate resilience is framed around climate change, resilient programming is meant to support the community beyond direct climate impacts before, during, and after emergencies.

Most organizations expressed their interest in expanding public services, with emphasis on improving Medford's **transportation systems**.
- Reliable, affordable, and accessible local public transportation for travelling within Medford and to surrounding communities, not just Boston.
- Options of alternative transportation modes, like public biking, that is consistent with surrounding communities.

Organizations were interested in other **public services that support a more accessible and inclusive city**.
- Language support and services
- Parks and open space activities for residents of all ages and abilities, not just for children.
- Robust affordable housing programs to support Medford families.

Many organizations emphasized the importance of **social justice education and creating accessible learning structures**.

- Social justice education and its relevance to Medford, including climate change.
- Training on socializing with people of different backgrounds and experiences (e.g., cultural sensitivity and disability awareness).
- Accessible skills classes (e.g., English, computer, job application), especially for socially vulnerable residents.
- Workshops on simple and concrete measures to prepare for climate events and other emergencies.

Wellness and family support programs for emotional well-being were frequently mentioned.
- Specified the need for informal support systems that avoid the stigmatization of "therapy".
- Highlighted spiritual programs to connect communities and to foster multicultural meaning making.

Organizations provided ideas for improving **emergency services**.
- Shelters where residents can access basic medical care for free and can bring pets for comfort
- Volunteer emergency response corps based on professional backgrounds to provide specialized support during emergencies, including psychosocial support.
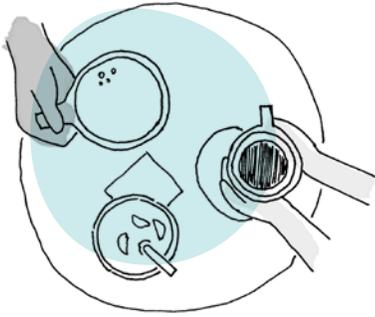
Social Connection: Multi-use gathering center

Resilience Hubs could serve as a space to host community events and recreational activities that involve multiple community groups. Hubs could function as a safe space wherein community connections are fostered across people of diverse backgrounds.

- Ideas included cafés that invite community members to stop in.
- Suggested using Resilience Hubs as a space for universal and inclusive recreation, designed for all community members with an awareness of different groups' needs.

Community Engagement: Center for Community Organizing

Organizations foresee the opportunity for community engagement within Resilience Hubs. Hubs could host community-wide discussions and could function as a gateway to local volunteer groups.

- Recommended recruiting and retaining staff of color in Resilience Hubs as providers and organizers.
- A shared permanent or drop-in workspace for community providers.
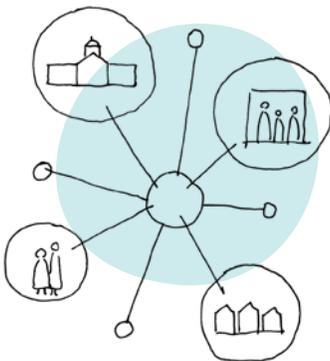
Information Access: Communications center

Organizations envisioned Resilience Hubs as a centralized communications center where residents can easily access information on available resources.

- Engage multi-sectoral partnerships and improve communications between City Hall, organizations, and residents.
- Information stations to advertise events, available community grants, or application guides for public services.
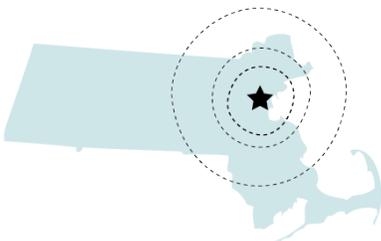
Collaborative Response: Regional Efforts

Organizations suggested that Resilience Hubs encourage regional collaboration. While some Hubs may be in Medford, organizations spoke to the strengths of a nodal network with neighboring municipalities.

- Could create more comprehensive preparedness plans to support gaps in capacity in lower-resource municipalities.
- Helps reduce confusion for organizations that support folks across different municipalities.

task
how

EXPLORE POTENTIAL SITES

3

task 1
where

RESILIENCE
HUB

task 2
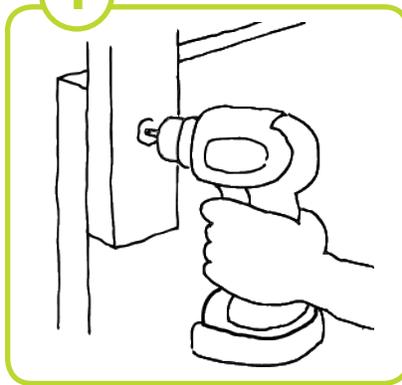what

Potential Site Areas for Resilience Hubs

Resilience Hubs are trusted, regularly utilized, and accessible. Using the Assessor's database, the city listed commercial (non-industrial) facilities of ≥5,000 ft^2 and their functionality.

- List refined to include sites that could potentially meet all five elements of an ideal Resilience Hub (see below).
- List cross-referenced with priority areas and environmental justice (EJ) communities.
- Preliminary analysis: only one candidate facility (St. Clement Church) was identified in a priority area, though not located in the EJ neighborhood section.
- Nine overall sites were within or close to an EJ neighborhood (Figure 3.1).
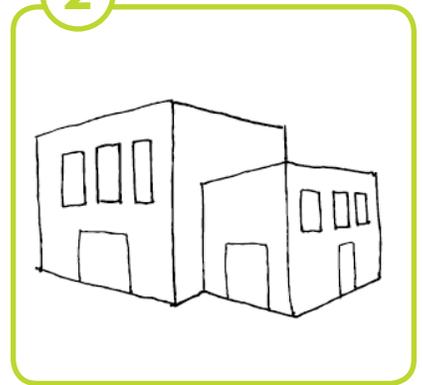
5 Elements of an Ideal Resilience Hub

Images adapted from: http://resilience-hub.org/what-are-hubs/
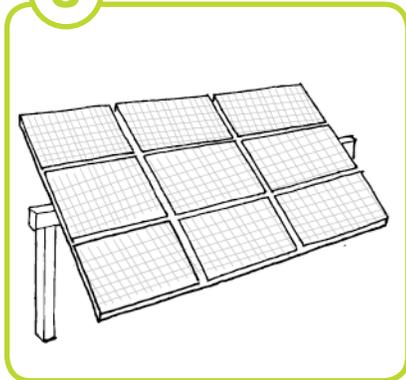
1 Programming

Offer a variety of services that promote community well-being and preparedness. Programs determined based on community interests.

2 Structure

Support year-round activities and emergency situations. Site must be in good condition, ideally not in a flood zone, and have kitchen amenities to provide food before, during, and after emergencies.

3 Power

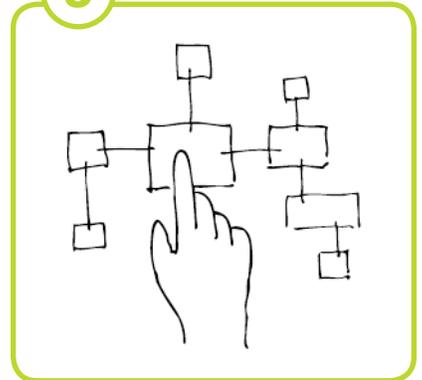Ensure reliable backup power during a disruption. Backup power systems should be both cost effective and sustainable.
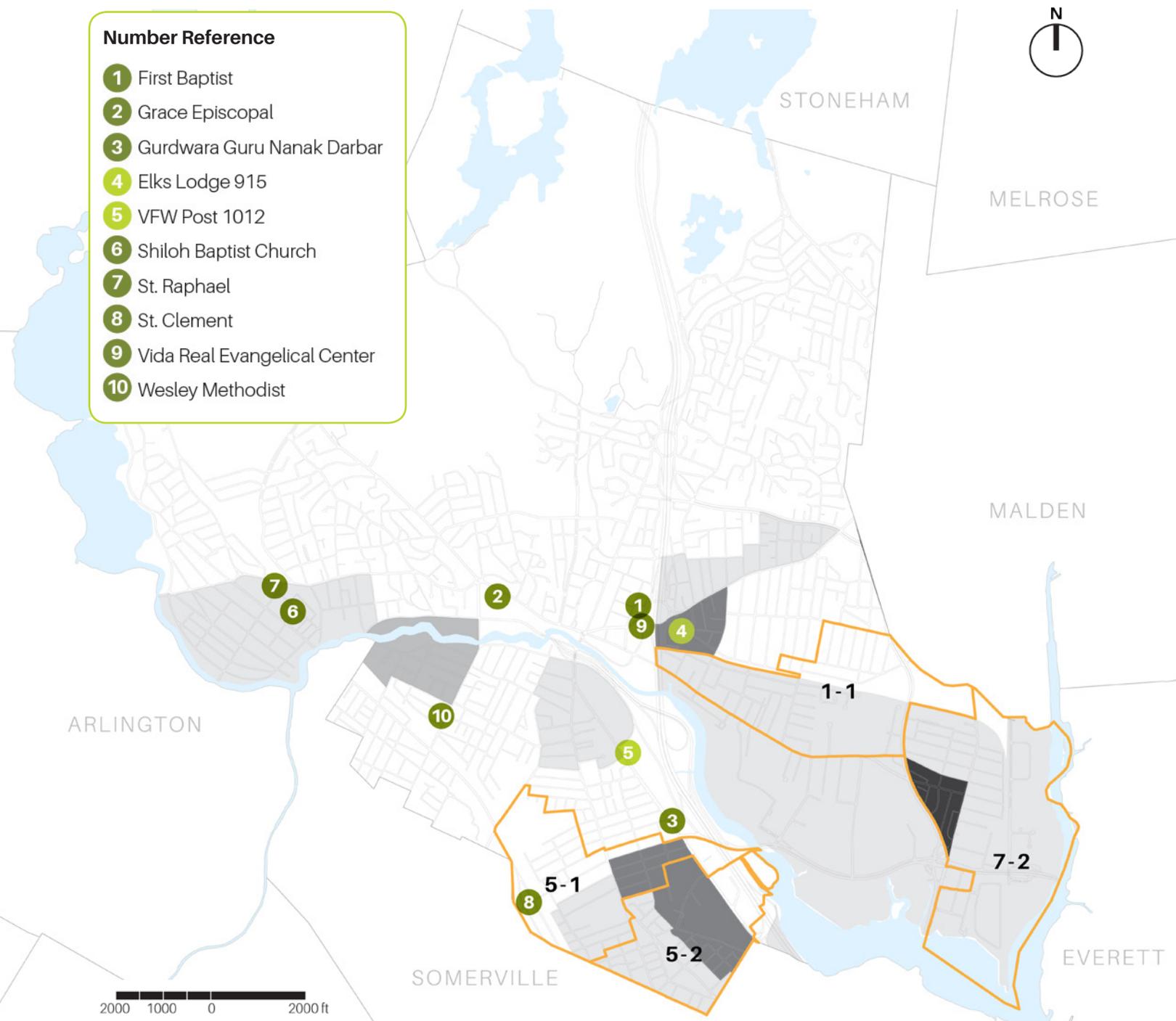
4 Communications

Ensure communication systems are functioning within and outside the service area, especially during disruptions and recovery.

5 Operations

Ensure appropriate personnel and processes are in place to operate the facility before, during, and after emergencies.

Figure 3.1 *Potential Resilience Hub Sites Map*

Number Reference

1. First Baptist
2. Grace Episcopal
3. Gurdwara Guru Nanak Darbar
4. Elks Lodge 915
5. VFW Post 1012
6. Shiloh Baptist Church
7. St. Raphael
8. St. Clement
9. Vida Real Evangelical Center
10. Wesley Methodist

2000 1000 0   2000 ft

LEGEND

Environmental Justice Criteria

- Minority
- Income
- Minority + Income
- Minority + English Isolation

Precincts & Neighborhoods

- 1-1 (Glenwood)
- 5-1 (South Medford)
- 5-2 (South Medford)
- 7-2 (Wellington)

Candidate Locations

- Social Clubs
- Religious

Resilience Hubs Site Checklist

This checklist was developed as both an educational and a screening tool. It lists priority characteristics within each of the 5 resilience areas: Programming; Structure; Power; Communications; and Operations allowing local providers to learn more about what it means to run a Resilience Hub.
- Cells shaded green are essential site services.
- Additional criteria listed promote enhanced functionality.

Resilient Programming

Criteria	Description	Why is this Important?	Response
Activities & Programming	Please list activities/ programming offered onsite.	A variety of programs are necessary to meet the needs of a diverse community.	
Basic Medical Support	Is basic first aid available for maximum occupancy?	Ongoing program.	
Childcare	Are childcare resources available?	Important to understand if a site is safe for children.	
Counseling	Are professional counselors available?	Servicing mental health needs during all 3 periods - normal, disaster, recovery - is an invaluable service.	

Resilient Structure

Criteria	Description	Why is this Important?	Response
Site Uses	Please list the primary uses of the building.	Structure function informs site capacity.	
Age of Building & Roof	How old is the building, and when was the roof replaced?	Physical structures indicate the ability to withstand extreme weather.	
Building Capacity	The maximum number of people legally allowed onsite.	Space restrictions determine capacity to support an influx of people during emergencies.	
Restrooms	How many operational restrooms and stalls are there?	Operational restrooms are a necessity.	
Kitchen Facilities	What is the current capacity for food preparation, cooking, and distribution?	Ability to provide healthy meals is a strong asset.	
Food Storage	How much clean storage exists for food or prepared meals?	Supporting local food systems in all 3 periods is critical for food security.	
Water & Ice	Is there public access to clean drinking water?	Clean drinking water must be made available to the maximum occupancy.	

Resilient Power

Criteria	Description	Why is this Important?	Response
Emergency Generator	Does a backup generator exist onsite? Can it provide up to 72 hours of power?	To support residents during all 3 periods, the ability to operate without power is essential.	
Renewable Energy	Does the site already have renewable energy installed?	Renewable energy systems help avoid environmental harms.	

Resilient Communications

Criteria	Description	Why is this Important?	Response
Communication Services	Is there reliable phone service onsite? Is this available during a power outage?	Ability to actively communicate with emergency authorities is essential.	
Wi-Fi	Is there public access to reliable Wi-Fi? Is this available during a power outage?	Ability to actively communicate with emergency authorities is essential.	
Phone Charging	Are phone charging stations publicly available? How many?	Ability of residents to shelter-in-place depends on information access and outside contact.	

Resilient Operations

Criteria	Description	Why is this Important?	Response
Emergency Plan	Does the site already have a plan for emergencies? How often is the staff trained on it?	Facility staff and volunteers must be aware of and trained on protocols for various emergencies.	
Staff/Volunteers	How many staff are employed by the organization? How many volunteers?	The number of people active and familiar with the site will determine which and how many programs can be considered.	

Administrative

Criteria	Description	Why is this Important?	Response
Strategic Plan	Does the organization have a strategic plan with objectives and priorities?	Aligning with existing strategic plans is important to not strain resources.	
Consituencies	Who are the key beneficiaries of your work?	Who the organization serves will determine its ability to support those most in need.	
Partners	Who are the key partners that help you accomplish your mission?	Understanding organizational partnerships demonstrates leadership of Resilience Hub providers.	

Next Steps

The assessment revealed that residents were intrigued by Resilience Hubs but were skeptical of reliable community engagement and questioned for whom Hubs would truly serve. Similarly, local providers were interested in Resilience Hubs, but would like to further understand how a physical space would be attained and how a multi-use, co-located space would operate.

Despite interest in Resilience Hubs, it is clear that next steps must first lay a foundation of trust between community and City Hall through inclusive outreach and an active commitment from the city to practice **anti-racism**. Further planning is also needed to organize Resilience Hub coordination, communications, and operations.

1. Invest in community engagement by hiring a team of local organizers of color who are already well established within their communities to spearhead a Community Resilience Task Force involved in designing resilient policies.

2. Develop a coalition of community providers within the Task Force to devise processes that enhance partnerships and communication and strategize a co-location system to co-host services.

3. Involve city offices and departments in coordinating city-run services and promoting equitable community resilience, requiring a commitment to anti-racist policies.

Appendix A

"R U OK?" Supplementary Figures

Figure A.1 *"R U OK?" Call Tracking*

Action/Results - Call Types	Total Residents Called	% of Total		Wards	Total Residents Called
Attempt again NOT reached	305	8.5		1-1	318
Language caller assigned	13	0.4		1-2	355
Left voice message	967	26.9		2-1	122
Remove - Called 2x, no answer	1080	30.0		2-2	196
Remove - Getting help from Family	360	10.0		3-1	479
Remove - Wants no more calls or hung up	450	12.5		3-2	514
Resident wants more CHECK-INS	104	2.9		4-1	92
Resident wants SERVICES	14	0.4		4-2	288
Remove - wrong phone number or deceased	306	8.5		5-1	232
Resident speaks another language	1	0.0		5-2	97
Grand Total	**3600**			6-1	208
Calls on R U OK (Phase 2) Late April/May/June	**6347**			6-2	188
Calls already made (see above)	**3600**	**57**		7-1	8
Total New Calls TO BE Made	**2747**			7-2	173
Total incl. Left VMsg & Attempt Again	**4019**			8-1	228
				8-2	102
				Grand Total	**3600**

Figure A.2 *How are residents being supported (other than the "R U OK?" program)?*

Sources of Support	Percent (%)
Family Member	73
Friend or Neighbor	21
Mystic Valley Elder Services (MVES)	3
Other Community-based Organization	3
Grand Total	**100**

Glossary

Adaptive Capacity
ability to get out of harm's way, adjust to changes, or rebuild after emergencies. Indicators that describe adaptive capacity include information access, social networks, and mobility; financial resources; race-ethnicity; and housing demographics.

Information Access
information access covers how residents learn about the situation in their community. How do they find trustworthy information?

Social Connectedness
connectivity covers an individual's social connections: the ways in which they are able to find or interact with other individuals, groups, or organizations.

Resources/Services Access
accessibility defines how easy a resident can find and access services they need including transportation or digital connectivity.

Anti-Racism
includes beliefs, actions, and policies adopted or developed to directly oppose racism and change policies, practices, or procedures that have racist effects.

Community Resilience
is a framework focused on 3 principles:
1. **connection** *intends to connect and build social networks that foster trust among residents, organizations, and local government.*
2. **engagement** *aims to engage residents with lived experience and those more susceptible to impacts in decision-making.*
3. **adaptation** *encourages the community to prepare for, absorb, and recover from future impacts together.*

Climate Preparedness
is a measure of a community's ability to withstand and respond to the anticipated impacts of climate change.

Community-based organization readiness
refers to an organization's climate preparedness and their capacity to protect their services and communicate with their constituents in the event of an emergency.

Environmental Justice
combines issues of environmental racism, environmental classism, and environmentalism into one framework to demand social justice, while seeking policies and strategies to eliminate environmental injustices, including health disparities, formed and maintained by structural inequity.

In Massachusetts, a community is identified as an Environmental Justice neighborhood if any of the following are true:
- *Area whose annual median household income is ≤ 65% of the statewide median*
- *≥ 25% or more of the residents identify as a race other than White*
- *≥ 25% of households have no one 14+ years who speaks English very well (English Isolation)*

Equity
prioritizes justice and actions to reduce the risk of communities facing social, economic, political and environmental disparities and injustice and who are equipped with fewer resources to adapt to changing conditions.

Racial Equity
is achieved when institutions eliminate policies and practices that create disparities in outcomes (health, education, income, etc.) by race.

Health Equity
is achieved when every person has the opportunity to fulfill the maximum potential of their own health regardless of social, economic, political and environmental factors.

Vulnerability
is often characterized as encompassing 3 dimensions
1. **Exposure** *how close an individual/group is to a hazard.*
2. **Sensitivity** *pre-existing social, economic, and political conditions that affect an individual/group's access to resources or exposure to hazards.*
3. **Adaptive Capacity** *the ability to get out of harm's way, adjust to changes, or rebuild after emergencies.*

- *Folks with higher sensitivity & lower adaptive capacity are more susceptible to impacts = higher vulnerability*
- *Folks with lower sensitivity & higher adaptive capacity can better tolerate impacts = lower vulnerability*

Physical Vulnerability
relates to the exposure of an individual/group to a hazard (e.g., areas with high flood risk and neighborhoods that are hotter than surrounding areas).

Social Vulnerability
relates to social indicators, such as demographics, race-ethnicity, and financial resources.

Climate Change Vulnerability
is a measure of a community's susceptibility to the adverse impacts associated with climate change.

Climate Change Vulnerability Assessment
synthesize currently available scientific information to describe the degree to which key resources, ecosystems, or other features are affected by the variability of climate or the potential changes in climate.