

A Framework for Implementing
RESILIENCE HUBS
IN YPSILANTI, MICHIGAN

M SEAS SCHOOL FOR ENVIRONMENT
AND SUSTAINABILITY
UNIVERSITY OF MICHIGAN

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A Framework for Implementing Resilience Hubs in Ypsilanti, Michigan: A Summary
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Project Information

This project was completed as part of an Integrative Research Seminar on Localization at the University of Michigan School for Environment and Sustainability. Please direct correspondence to each author using the email hyperlinks above.

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Introduction

In the 2010s, drivers including increasing global temperatures, worsening income inequality, inequitable access to social services, and the need for improved community building led to the conceptualization of resilience hubs.¹ As part of an Integrative Research Seminar at the University of Michigan School for Environment and Sustainability, our multidisciplinary team has compiled a variety of resources, analyses, and tools to streamline the process of establishing resilience hubs in Ypsilanti, Michigan. We believe Ypsilanti's rich history of grit and progressiveness makes it a particularly suitable city to be one of the first to pilot, refine, and benefit from resilience hubs.

Climate Change and Other Challenges Coming to Southeast Michigan

Increasing greenhouse gas emissions from power generation using fossil fuel, industrial production, and certain food systems lead to dramatic warming of the planet. Excess heat in the planet's atmosphere, oceans, and land has a variety of ecological and social consequences. Southeast Michigan in particular has faced and will continue to face rising temperatures with the potential for deadly heat waves during the summer. By the end of this century, summer temperatures in Michigan are predicted to be the same as present-day summer temperatures in Arkansas.² Possible climate change-related impacts other than warming include shortened seasons for recreational activities, damaged ecosystems, harmful ground-level ozone creation, declining crop yields,



2011 HURON RIVER FLOOD FROM MICHIGAN AVE BRIDGE IN YPSILANTI
From Wikimedia Commons: https://commons.wikimedia.org/wiki/File:Huron_River_flood_2011_from_Michigan_Ave_bridge_2.JPG

¹ Rogerson, B., & Narayan, M. M. (2020, June 22). *Resilience Hubs Can Help Communities Thrive- and Better Weather Disasters*. The Pew Charitable Trusts.

<https://www.pewtrusts.org/en/research-and-analysis/articles/2020/06/22/resilience-hubs-can-help-communities-thrive-and-better-weather-disasters>

² Bradley, R., Karmalkar, A., & Woods, K. (2016). *How will global warming of 2C affect Michigan? Observed and projected changes in climate and their impacts*. Climate System Research Center.

https://www.geo.umass.edu/climate/stateClimateReports/MI_ClimateReport_CSRC.pdf

intense flooding, and more extreme precipitation events.³ While many of these effects have already become apparent over the past few decades, each will worsen with increasing emissions and warming as time goes on.

The projected migration caused by climate change impacts may also necessitate increased housing development. If poorly planned and built, such structures may diminish natural buffers against the aforementioned effects of climate change. Aside from climate-related impacts, several other environmental insecurities may be exacerbated in the coming years in Southeast Michigan. Such insecurities include water unaffordability for low-income populations in addition to deteriorating infrastructure,⁴ food inaccessibility,⁵ a lack of reliable and affordable energy amid rising rates,⁶ and rental housing insecurity.⁷

Neighborhood Resilience and Resilience Hubs

During times of great distress, people are forced to turn to their neighbors for assistance. This is particularly the case for underserved and vulnerable neighborhoods. Climate change is causing more frequent and increasingly severe hazard events, as outlined above. These events have the potential to further negatively impact access to resources necessary to daily life, such as food, water, and energy. In order to survive and thrive before, during, and after such events, communities must foster resilience, which is defined as the adaptive ability to resist and recover from hardship.

Neighborhoods can build resilience through a variety of means. Resilience-building tactics recommended by the Post Carbon Institute in the book *The Community Resilience Reader* include local and democratic control of renewable energy production, new locally crafted principles for the management of aging water systems, small-scale food provisioning systems, education that includes a focus on building resilience, community-based waste management, tactical urbanism, and resilience assessments.⁸ Other methods include resilience training and

³ U.S. Environmental Protection Agency Climate Change Division. (2016, August). *What Climate Change Means for Michigan*.
<https://19january2017snapshot.epa.gov/sites/production/files/2016-09/documents/climate-change-mi.pdf>

⁴ Rockowitz, D., Askew-Merwin, C., Sahai, M., Markley, K., Kay, C., & Reames, T. (2018). *Household water security in metropolitan Detroit: Measuring the affordability gap*. University of Michigan Poverty Solutions.

<https://poverty.umich.edu/10/files/2018/08/PovertySolutions-PolicyBrief-0818-r2.pdf>

⁵ FAIM Project. (2018). *Hunger in Michigan*. <https://www.faimproject.org/research/hunger/>

⁶ Stamler-Goody, C. (2020, July 27). *Abrams Clinic Advocates for Energy Justice in Detroit*. The University of Chicago Law School. <https://www.law.uchicago.edu/news/abrams-clinic-advocates-energy-justice-detroit>

⁷ Treskon, M., Pendall, R., Schilling, J., Hedman, C., & Gastner, J. (2017). *Southeast Michigan Housing Futures: A Converging Story for the Detroit Metropolitan Area*. The Urban Institute.

https://www.urban.org/sites/default/files/publication/92251/detroit_housing_futures_-_a_converging_story_for_southeast_michigan_finalized_0.pdf

⁸ Lerch, D. (Ed.). (2017). *The Community Resilience Reader: Essential Resources for an Era of Upheaval*. Island Press.

provisioning of emergency preparedness kits for individual residents and households, resilience initiatives conducted by neighborhood groups and associations, improved stormwater management, and the construction of buffers against natural hazards, such as trees and seawalls. An increasingly popular strategy for building resilience is the construction of resilience hubs, which can be built from scratch or added to an existing building. While such physical spaces are not the only way to conceptualize resilience hubs - with community ambassador programs and “block leader” systems being other possibilities - physical hubs offer a centralized location for such efforts to take place, giving them greater visibility to the broader community.



The core mission of resilience hubs is to provide essential physical and psychological resources to neighborhoods with the goals of enhancing well-being, fostering social connectivity, and building a greater preparedness for any kind of hazard event, with the aim of shortening the long, drawn-out restoration efforts that typically follow. Hubs are transformative in nature, as they can also be an important vehicle for disseminating tools and information necessary for local energy, food, and knowledge production. Ranging from individuals who serve as ambassadors for their neighborhood to dedicated and accessible facilities with food supplies, water filtration systems, renewable power with energy storage, and restorative building designs

that actively incorporate nature, hubs can take shape in a multitude of ways. In order to empower residents and maximize the likelihood of use, it is vital for implementation teams to use a highly participatory approach that draws on the ideas of local residents and eventual users of the hub as much as possible in the initial analysis and design processes. Our work here contributes to national efforts working toward best practices for partnering with communities in helping establish useful and usable resilience hubs, and it provides an in-depth case of the initial phases of this process for Ypsilanti, Michigan, working alongside the Ypsilanti Sustainability Commission.

Analysis to Identify Areas of Priority

Ypsilanti is comprised of several census block groups, which are demographically similar areas containing between 600 and 3,000 people each.⁹ A block group can be considered similar to how a neighborhood would operate but allows for a more standardized boundary to enable research, and the replication of that research, along geographic lines. While each of these areas deserves the benefits resilience hubs can offer, prior analyses have determined that the cost of implementation can be upwards of \$1,000,000 per hub,¹⁰ implying that resource limitations will prevent citywide establishment of hubs at first. For the purposes of this research, we determined the areas of Ypsilanti that are most vulnerable to the impacts of climate change and other environmental insecurities given their level of economic and social resources.

This analysis was performed using data from the U.S. Environmental Protection Agency (EPA) Environmental Justice Screening and Mapping Tool, EJSCREEN.¹¹ The tool includes a variety of demographic variables and environmental indicators that are combined to assess a community's potential vulnerability. The output is recorded as a percentile relative to the national average. For example, if an area scores in the 87th percentile for exposure to a given environmental indicator, this signals that 87% of block groups in the United States have lower concentrations of that indicator. The tool then combines the prevalence of the indicator with the underlying demographics of the block group to create a measure of risk. Demographic factors may relate to the susceptibility of sickness from environmental pollutants in a number of ways. For example, children have higher breathing rates, which may cause them to inhale more of a pollutant than adults. A greater density of children in a block group, then, will be

⁹ U.S. Department of Commerce Economics and Statistics Administration Bureau of Census. (1994). *Chapter 10: Census tracts and block numbering areas*. The Geographic Areas Reference Manual (GARM).

<https://www2.census.gov/geo/pdfs/reference/GARM/Ch10GARM.pdf>

¹⁰ City of Ann Arbor Office of Sustainability. (2020, April). *Ann Arbor's Living Carbon Neutrality Plan*.

https://www.a2gov.org/departments/sustainability/Documents/A2Zero%20Climate%20Action%20Plan%20_3.0.pdf

¹¹ U.S. Environmental Protection Agency. (2018, August 2). *EJSCREEN: Environmental Justice Screening and Mapping Tool*. <https://www.epa.gov/ejscreen>

indicated by a higher score than in an area comprised of nearly all adults. A more in-depth analysis on this tool and how the analysis was performed is included in the full report version of this document.

We performed a geographic information system (GIS) analysis using data from the EJSCREEN tool to better understand the exposure levels and subsequent risks to the Ypsilanti population. As resilience hubs are best operated at the neighborhood level, we opted to define boundaries by the census block groups. In total, eight environmental indicators each factored in with six underlying demographic variables indicating risk were used to perform the analysis. After interpreting the results, we found six different block groups that were consistently within the highest clustered percentiles of exposure for each indicator, meaning that these neighborhoods in Ypsilanti were the most vulnerable to local environmental hazards due to both

socioeconomic and environmental indicators at the time of the analysis. It is our recommendation that these neighborhoods, highlighted in **Figure 1**, be prioritized for the development of resilience hubs.

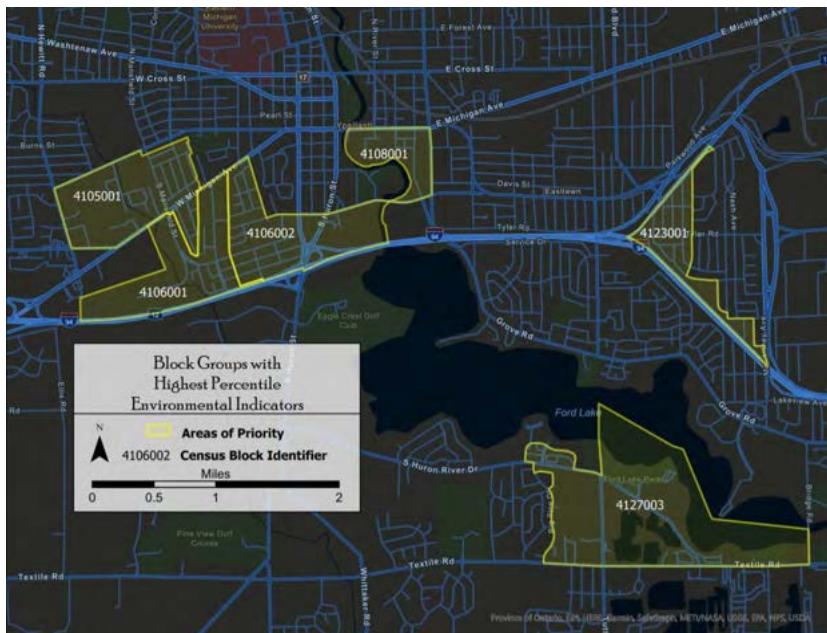


FIGURE 1: AREAS OF PRIORITY BY MOST VULNERABLE BLOCK GROUP IN YPSILANTI

A resilience hub is defined by the community it hopes to serve. One, tight-knit neighborhood may opt for a resilience block leader approach or a more dispersed model of resilience leadership

as is the case with “ambassador programs,” while others may look to collectively create a physical building from the ground up. A third option may be to convert existing structures that can already facilitate the needs of a neighborhood. All are viable options worth considering when planning for neighborhood resilience. However, the notion of restructuring existing spaces for the purposes of a hub has two particularly important benefits in that it is less expensive than building a new hub and is more centralized than a block leader or ambassador program approach. While these are decisions that would need to be determined by the residents of each neighborhood, we expanded upon our prior analysis to include a contextual exploration of how restructuring existing buildings in Ypsilanti would take place. In each of the

six previously identified block groups, we completed further GIS analysis to identify existing buildings that have the potential to be readily transformed into a resilience hub.

First, buildings were categorized by their functional purpose. This allows for a better understanding of the layout of a neighborhood and the resources that are already available to the residents. Furthermore, it offers the ability to quickly recognize structures that may be suitable for a hub. We determined potential sites based on the general criteria provided by the Urban Sustainability Directors Network guidance for evaluation.¹² These primarily included locations that are generally highly trusted and frequently visited within the neighborhood, such as community centers, places of worship, local businesses, healthcare facilities, and government offices. We further narrowed these potential structures by determining whether the current use of the building offers a *community-serving* purpose (i.e., whether community members would already visit this location for purposes that align with those of a resilience hub; in this case, spaces such as government offices might be considered to a lesser extent). In conjunction with participatory feedback gathered from surveys, this type of analysis could inform coalition-building strategies and identify specific partners who may be interested in neighborhood resilience efforts.

The buildings highlighted in **Figure 2** represent some of the potential spaces identified in block group 4106002 that could be restructured to function as a resilience hub while still serving their original intended purpose for the community. It is important to note that we are not making any *specific* recommendation for a hub location in Ypsilanti. Rather, such recommendations require further information pertaining to whether a given location will meet identified needs and whether it will be a trusted and comfortable place for a hub,



FIGURE 2: SOME POTENTIAL SITES WITHIN BLOCK GROUP 4106002 THAT FIT CRITERIA

¹² Baja, K. (2019). *Guide to Developing Resilience Hubs*. Urban Sustainability Directors Network. http://resilience-hub.org/wp-content/uploads/2019/10/USDN_ResilienceHubsGuidance-1.pdf

informed by considerable community input. However, this analysis can serve as an important first step and provide some structure to such conversations moving forward.

Survey Instrument

Given the participatory nature of building a resilience hub, we created a survey instrument to capture what people living in Ypsilanti, Michigan want to see in a neighborhood-scale resilience hub (see Appendix 1 for the full instrument). This survey instrument captures three major elements of a resilience hub that we argue are essential: (a) the physical/material needs of the neighborhood; (b) the psychological and social needs of the community; and (c) the other relevant details, including the kind of building residents think would be suitable for a hub and the type of hub that would work in the neighborhood. These items provide insight into how a resilience hub can best provide value to the neighborhood. Consider, for example, wireless internet access, which we classified as a physical/material need. One can imagine a case where residents note on the survey that internet access is something that they would want to have available in a resilience hub. Considering the current circumstances presented by the COVID-19 pandemic, internet access would serve as an essential factor in maintaining community connectivity during similarly uncertain times. From these survey results, the implementation team would then know to make the addition of a modem, routers, and possibly computers or tablets a priority during the implementation of the hub.

During our survey testing phase, we received feedback from both the members of the Ypsilanti Sustainability Commission as well as from members of the community. For the following phases of this project, future project teams from both the community and the University of Michigan School for Environment and Sustainability master's program will begin data collection to inform the implementation of a hub. The survey can be distributed online and by mail to Ypsilanti residents, ideally starting with those in the previously identified areas of priority, to increase survey accessibility and collect a wide variety of responses from across the community.

Interview Protocol

In order to better understand the needs of the community and how a resilience hub might best serve the residents of a specific Ypsilanti neighborhood, we developed an interview protocol that complements our survey instrument (see Appendix 2 for the full set of questions). This protocol includes questions that assess both psychological and physical needs that residents indicated as crucial for a resilience hub to provide in the survey phase. Formed in part from questions that were used to source community feedback for a forthcoming Ann Arbor resilience hub, some questions also ask residents to envision what they would like their community to look like five to ten years down the road.

In piloting this forty-five minute interview, we collaborated with the Ypsilanti Sustainability Commission. They provided feedback from two perspectives: both their role as community residents and their role as community leaders in the context of sustainability and community resilience. We also plan to pilot-test this interview with a group of longtime community residents to diversify our sample and include those who are not necessarily involved in sustainability initiatives occurring in the area.

A coding framework for the interview results has also been constructed with the following research questions in mind:

- Do the community members of Ypsilanti find resilience hubs to be a beneficial concept to help reduce resource insecurities and pre-familiarize with climate change impacts?
- What features of a resilience hub do neighborhood members find most useful to meet their physical and psychological needs?
- Which approach to a resilience hub would neighborhood members most prefer?
- What barriers does the community foresee in the ability to implement a hub?

This set of research questions will inform a series of workshops that will take place under the guidance of future project teams, with community members from neighborhoods identified in the priority block groups analysis detailed above. These workshops, with input and feedback from members of the Ypsilanti Sustainability Commission, will allow for continued community partnership and ensure that whichever community resilience building approach is chosen is done by the residents to best serve the residents.

Funding for Establishing Resilience Hubs

As underserved cities with limited resources are often the ones that would derive the most value from resilience hubs, sizable and stable funding sources are of particular concern. Small solar energy and storage systems for hubs can cost around \$70,000 as seen with an Ann Arbor resilience hub,¹³ and the cost to build a hub from scratch can be up to \$1,000,000 as previously mentioned in this report. Conventional, commonly used funding mechanisms include municipal funds, municipal debt, and grants and subsidies from larger governmental bodies, non-governmental organizations, philanthropists, or companies.

Non-conventional but potentially useful funding mechanisms include resilience bonds, tax-increment financing, excess from revolving energy funds, civic crowdfunding, third-party ownership for renewable energy systems at the hub, utility incentives for energy efficiency or

¹³ Stanton, R. (2020, September 18). *Ann Arbor celebrates launch of city's first solar-powered 'resilience hub.'* MLive.

<https://www.mlive.com/news/ann-arbor/2020/09/ann-arbor-celebrates-launch-of-citys-first-solar-powered-resilience-hub.html>

renewable energy at the hub, and in-kind donations. Resilience bonds are a fairly new financial product with a somewhat complex structure, but they involve payments for resilience infrastructure from insurance companies if the infrastructure will help reduce insurance payouts in the event of a natural disaster.¹⁴ Tax-increment financing involves municipal loans taken out to pay for projects expected to increase property values and therefore property taxes that are then used to repay the loan. Revolving energy funds are pools of money that are used by different parts of an organization to pay for renewable energy and energy efficiency projects that have future savings used to pay back into the fund. Excess proceeds from such a fund could be deployed to help fund resilience hubs. Civic crowdfunding involves the solicitation of small donations for public interest projects from distributed groups of people, generally using the internet. Third-party ownership involves partnering with a private energy developer who installs and owns the renewable energy or energy efficiency system in exchange for payments for any energy generated or saved. This structure reduces capital expenses in favor of drawn-out operating expenses. Many utility companies also offer incentives for renewable energy and energy efficiency projects, and the DSIRE database can be helpful for uncovering such opportunities.¹⁵ Finally, in-kind donations from surrounding residents or businesses of labor, services, and supplies can also help reduce the costs of implementing a resilience hub.

Given the substantial costs of hub development, a mix of sources will likely need to be used in most cases. As philanthropic organizations are expected to play a large role in resilience hub funding, specific organizations dedicated to related causes are listed in Appendix 3.

Conclusion

Initially, our research goal was to assess resident needs and desires, identify suitable locations for resilience hubs, and take the first steps toward working with the city of Ypsilanti and other partners to plan and begin building a fully functioning hub in Ypsilanti. However, the COVID-19 pandemic disrupted the ability to collect data and thus delayed the rest of the process. In response, we altered the project's deliverables to feature much of the information discussed in this report. We hope what we have shared will enable future project teams to make significant and rapid progress on establishing resilience hubs in multiple neighborhoods around the city. We hope that future groups can learn from our analysis and help contribute to Ypsilanti's rich history and the development of resilience hubs in general. In early 2021, this project team will begin transitioning this work to the next group from the School for Environment and

¹⁴ re:focus partners. (2017). *A Guide for Public-Sector Resilience Bond Sponsorship*. Re.Bound Program. <http://www.refocuspartners.com/wp-content/uploads/pdf/RE.bound-Program-Report-September-2017.pdf>

¹⁵ NC Clean Energy Technology Center. (n.d.). *Database of State Incentives for Renewables & Efficiency*. DSIRE: NC Clean Energy Technology Center. <https://www.dsireusa.org/>

Sustainability, who will begin data collection and make efforts toward the implementation of a resilience hub.

It is important to note that ongoing hub efforts independent of this project's deliverables are also actively underway in Ypsilanti, spearheaded by members of the Ypsilanti Sustainability Commission. Such efforts include the provisioning and distribution of resources from the Parkridge Community Center. For further information on these efforts, please reach out to the Ypsilanti Sustainability Commission.

Appendix 1 - Survey Instrument

Background Information and Questions

This survey was created by a group of graduate students at the University of Michigan School for Environment and Sustainability. Our goal is to gather community input on the needs of residents of Ypsilanti as it relates to resilience hubs. This survey contains questions that relate to your experience as an Ypsilanti resident.

Your participation is completely voluntary, and you can skip any question you want. Your responses to this survey will be anonymous. We thank you in advance for your participation. This should take about 7 minutes.

Resilience Hub Explanation

Resilience hubs provide day-to-day resources to residents that are vital during emergencies. Climate change increases the likelihood of emergencies in Ypsilanti. Some day-to-day resources can be physical like food and wireless internet. Other day-to-day resources can be psychological and social, like a feeling of closeness to one's neighbors.

Hubs also serve as spaces to teach how to increase community resilience, which is a community's ability to adapt to and recover from emergencies. Events and classes can be held year-round with the goal of teaching these skills and improving social connections.

Please take a moment to look at the graphic of a resilience hub that is below this text before moving on to the next page. If you are taking this survey on a smartphone or tablet, you may use your fingers to zoom in on the picture.

What goes into a Resilience Hub?



Local Building and Block Leader

There are different kinds of hubs. One type could involve a **local building** where people can meet, take classes, farm fresh food, and get other resources. This is the type discussed in the survey so far.

Another type could involve having **block leaders** whose neighbors identify them as trusted leaders in their community. They may keep resources in their home, teach their neighbors how to get their own food and energy, and give out supplies and support in times of need.

How well would each type work in your neighborhood? [Rate on the following scale: (1) Not at all, (2) A little, (3) Somewhat, (4) Very, and (5) Extremely]

- 1. Local building
- 2. Block leader

Hub Importance and Location

The following list contains places where a resilience hub could be located. How well do you think these places would work for a resilience hub? [Rate on the following scale: (1) Not at all, (2) A little, (3) Somewhat, (4) Very, and (5) Extremely]

- 1. Religious building
- 2. School
- 3. Hospital
- 4. Government building (e.g., city hall)
- 5. Police station
- 6. Fire station
- 7. Local park
- 8. Community center
- 9. Library
- 10. Local business
- 11. Home in your community

12. What other spaces come to mind that would make sense for a resilience hub?

Social and Emotional Resources

A resilience hub can offer the following resources, services, and experiences. How important to you is it that a hub offers these things? [Rate on the following scale: (1) Not at all, (2) A little, (3) Somewhat, (4) Very, and (5) Extremely]

- 1. Friendship
- 2. Safety and security
- 3. Cultural experiences
- 4. Hope for the future
- 5. General feeling of well-being
- 6. Quietness and solitude
- 7. Being close with nature
- 8. Child care
- 9. Elder care
- 10. Classes on life skills, like gardening and home repair
- 11. Feeling like you belong in your neighborhood
- 12. Fun and play
- 13. Opportunities to help others
- 14. Religious/spiritual experiences
- 15. Relationship with pets (e.g., dogs and cats)

16. Other (Please list) _____

Please rate your agreement with the statements below. [Rate on the following scale: (1) Not at all, (2) A little, (3) Somewhat, (4) Very, and (5) Extremely]

- _____ 1. I am afraid that some disaster will occur soon
- _____ 2. I worry that I will not be able to provide for my family
- _____ 3. I believe that my neighbors would help me in an emergency
- _____ 4. I would be willing to work together with others on something to improve my neighborhood
- _____ 5. I would be comfortable eating something grown in a neighbor's yard
- _____ 6. I desire to relax more often in a quiet place
- _____ 7. I want to talk with others about my fears and worries
- _____ 8. I want to enjoy the beauty of nature more often

Material Resources

A resilience hub can offer the following supplies and services. How important is it to you that a hub offers these things? [Rate on the following scale: (1) Not at all, (2) A little, (3) Somewhat, (4) Very, and (5) Extremely]

- _____ 1. Clothing
- _____ 2. Electricity and lighting
- _____ 3. Temperature control (e.g., air conditioning)
- _____ 4. Toiletries (e.g., toothpaste and deodorant)
- _____ 5. Cleaning supplies
- _____ 6. Medicine
- _____ 7. Entertainment (e.g., games and movies)
- _____ 8. Electronics
- _____ 9. Internet access
- _____ 10. Tools
- _____ 11. Gardening supplies
- _____ 12. Prescription eyewear
- _____ 13. Personal accessories (e.g., watches and jewelry)
- _____ 14. Public transportation
- _____ 15. Repair services for things like appliances
- _____ 16. Pet food and other pet needs
- _____ 17. Other (Please list) _____

18. How important do you think a hub is for your neighborhood? [Rate on the following scale: (1) Not at all, (2) A little, (3) Somewhat, (4) Very, and (5) Extremely]

Conclusion

Thank you for taking our survey! The results will inform next steps for a possible resilience hub project in Ypsilanti.

If you have any questions or further comments, please email yspsireshub@umich.edu

Email feedback: If you would like to help us by providing more feedback on resilience hubs in your community, please provide your email below. Your email will not be linked to your responses.

Improvements: Do you have any feedback for the survey creators? How could this survey be improved?

Appendix 2 - Interview Protocol

Introductory script to mention the following key points:

- Thank participants for joining the call today and for their previous participation in filling out our online survey.
- Purpose of the call: To discuss community resilience and how we may plan with our community to...
 - Prepare for climate impacts and other possible futures^[1] and
 - Positively adapt to these impacts
- Introduction to resilience hubs and resilience block leaders > “The services found in resilience hubs can be provided to a community either through a physical location or in the form of a block leader.”
 - A physical hub = 1) a community building in a trusted location, 2) open year-round, 3) staffed by volunteers, and 4) includes important resources for the community.
 - A block leader approach = a trusted individual within a neighborhood, responsible for similar aspects of what a physical hub can provide.
 - i.e., they may host or share informative workshops, or distribute resources during an emergency.
 - More localized approach, typically on a block-by-block basis, while a physical hub extends to an entire neighborhood or beyond.^[2]

(distribute hub infographic in person or display on-screen if in an online format)

^[1] Mention when talking that “possible futures” might entail things like higher food prices, higher energy prices, less stable government support

^[2] If an interviewee asks about differences, discuss how block leaders can be a bit easier to implement in terms of time and money

- “We **hope to determine which may be the best approach** for your neighborhood to increase resilience, while also **understanding the day-to-day needs** you have in your community.”
- What our questions and the session will look like: This is in no way a formal interview. Our session shouldn’t last more than about an hour, and we plan to record it. Their participation throughout is completely voluntary.
 - Ask if anyone has questions before continuing (gain consent to record)
- Intro questions: Have them go around and introduce themselves to establish a sense of familiarity, asking who they are and what neighborhood they’re from, as well as how long they’ve been a resident.

Community Needs Questions (“The following are questions about your needs as a resident in your neighborhood...”)

1. What makes your neighborhood a great place to live?
2. What challenges are present in your neighborhood?
3. Reflecting on past situations, what kinds of things are easily accessible in your neighborhood?
4. Reflecting on past situations, what kinds of things are difficult to access in your neighborhood?
5. Given the situation that arose from COVID-19, how prepared do you think your neighborhood is to meet the needs of residents in future emergencies?

Social and Emotional Needs Survey Questions (“The following are questions that ask about your experience with others in your neighborhood, and your experience as a resident more generally...”)

6. Have you attended neighborhood-wide events in the past?
 - a. Which events?/What kind of events?
 - b. Can you describe what your experience was like at this event?
7. Are you part of any organizations designed to help residents in your neighborhood, and if so, which ones?
8. Have you felt that you could go to your neighbors with any needs you had in an emergency?
9. When you imagine your neighborhood in 5-10 years, what do you hope for?
 - a. What is needed to get there?
 - b. What challenges or barriers do you anticipate?

Approach questions (“Based on the above information...”)

10. In the resilience hub located in a physical community building as described above, what would you include?
 - a. What should the space look like?
 - b. What services or programs would be available to people in your neighborhood?
11. Similarly, what would you expect of a resilience block leader in your neighborhood?
 - a. What should they do to coordinate a neighborhood emergency response?
12. Do you feel either yourself or any of your neighbors could build resilience in your neighborhood? (If yes, ask who and what qualities they have that make the interviewee confident that they could serve as a block leader.)
13. Imagine an emergency event^[3] happening in your community 5-10 years down the road. What positive neighborhood responses do you expect in this situation?
 - a. What are the strengths of your neighborhood that would help create a positive neighborhood response in this situation?
 - b. What are the weaknesses of your neighborhood that would prevent creating a positive response in this situation?

^[3] If asked to describe an example of an emergency event, mention we don't want to be too specific or narrow in how we think about this, but examples could include floods, tornados, pandemics, etc. and that we are trying to get a general sense of neighborhood responses to collective issues.

Appendix 3 - Potential Funding Organizations

These philanthropic organizations were identified during the project as potential funding sources for implementing resilience hubs in Ypsilanti. Related funding priorities for each organization are also listed. Michigan-based organizations have been listed first as it may be easier to procure funding for a project in Ypsilanti from them.

Michigan-Based Organizations

- [Americana Foundation](#) - Agriculture; Community and economic development; Community improvement; Environment; Food security
- [Charles Stewart Mott Foundation](#) - Community and economic development; Education; Employment; Natural resources; Sustainable development; Urban development; Urban renewal
- [Community Foundation for Southeast Michigan](#) - Academics; Children and youth; Economically disadvantaged people; Low-income people; Students
- [DTE Energy Foundation](#) - Community and economic development; Community improvement; Energy efficiency; Environment; Family services; Green building; Sustainable development; Urban development

- [Ford Motor Company Fund](#) - Basic and emergency aid; Community and economic development; Environment; Family services; Food aid; Human services; Special populations support
- [Herbert H. and Grace A. Dow Foundation](#) - Community and economic development; Human services; Natural resources; Science
- [James A. & Faith Knight Foundation](#) - Family services; Human services; Women's services; Youth development
- [Kresge Foundation](#) - Children and youth; Economically disadvantaged people; Ethnic and racial groups; Low-income people; Students; Young adults
- [Masco Corporation Foundation](#) - Economic development; Environment; Housing development; Human services; Natural resources; Public affairs; Public policy
- [Michigan Health Endowment Fund](#) - Family services; Food security; Health; Human services; Public health; Special population support
- [Porter Family Foundation](#) - Climate change; Economic development; Education; Human services; Natural resources
- [Ralph C. Wilson, Jr. Foundation](#) - Economic development; Education; Human services; Youth development
- [W.K. Kellogg Foundation](#) - Community and economic development; Community improvement; Education; Health; Sustainable development; Youth organizing; Youth services
- [Wege Foundation](#) - Community and economic development; Environment; Environmental education; Human services; Natural resources

Relevant Organizations Located Outside of Michigan

- [Bank of America Charitable Foundation](#) - Community and economic development; Community improvement; Environment; Family services; Green building; Human services; Social enterprise
- [Ben and Jerry's Foundation](#) - Community and economic development; Community food systems; Environment; Human services; Social rights; Special population support
- [Comerica Charitable Foundation](#) - Community and economic development; Community improvement; Family services; Human services; Special population support
- [Compton Foundation](#) - Antidiscrimination; Climate change; Communication media; Social rights
- [Energy Foundation](#) - Climate change; Economic development; Energy efficiency; Energy resources; Environment; Natural resources; Renewable energy; Social rights
- [Jessie Smith Noyes Foundation](#) - Antidiscrimination; Community and economic development; Environmental justice; Toxic substance control; Youth development
- [Joyce Foundation](#) - Economic development; Education; Environment; Natural resources

- [McKnight Foundation](#) - Climate change; Energy; Science; Community development
- [Surdna Foundation](#) - Antidiscrimination; Community and economic development; Energy efficiency; Environment; Green building; Social rights; Sustainable development
- [We Energies Foundation](#) - Basic and emergency aid; Community and economic development; Disaster and emergency management; Environment; Environmental education; Job creation and workforce development; Sustainable development
- [Wells Fargo Foundation](#) - Community and economic development; Environment; Green building; Human services; Sustainable development