

# Resilience Hubs Discussion

March 18, 2024

Ava Community Advisory Committee



# Resilience Hub Discussion

Agenda:

Review Feedback from Resilience Hub Community Surveys

What is a Resilience Hub?

Where are Resilience Hubs sited

Who has access?

Barriers to Resilience Hubs

Discussion



# Resilience Hub Definition from Survey:

"I like APEN's definition: Trusted community spaces where community members can access services for disaster response and recovery, as well as “to gather, organize, and access resilience-building social services on a daily basis.” Rooted in the following pillars:

Preparing vulnerable community members for extreme weather challenges:

Becoming a Model for Climate Solutions: Resilience hubs can directly address the Climate Crisis by prioritizing renewable energy, zero waste systems and other green building practices and programming to showcase climate solutions.

Building Trust and Relationships to Strengthen Community Cohesion: With crime, racism, bullying and everything else related to our social systems unraveling on the rise, resilience hubs can serve as safe and inclusive places, with opportunities for community members to build and strengthen relationships."



# Resilience Hub Definition USDN:

## Resilience Hubs

### Shifting Power to Communities and Increasing Community Capacity

Resilience Hubs are community-serving facilities augmented to:

1. support residents and
2. coordinate resource distribution and services before, during, or after a natural hazard event.

They leverage established, trusted, and community-managed facilities that are used year-round as neighborhood centers for community-building activities. Designed well, Resilience Hubs can equitably enhance community resilience while reducing GHG emissions and improving local quality of life. They are a smart local investment with the potential to reduce burden on local emergency response teams, improve access to health improvement initiatives, foster greater community cohesion, and increase the effectiveness of community-centered institutions and programs.

Moreover, Resilience Hubs provide an opportunity to build local community power and leadership. They are focal points for neighborhood revitalization that provide the resources residents need to enhance their own individual capacity while also supporting and strengthening their neighborhood and neighbors. Instead of being led by local government, they are intended to be supported by local government and other partners but led and managed by community members, community-based organizations, and/or faith-based groups.



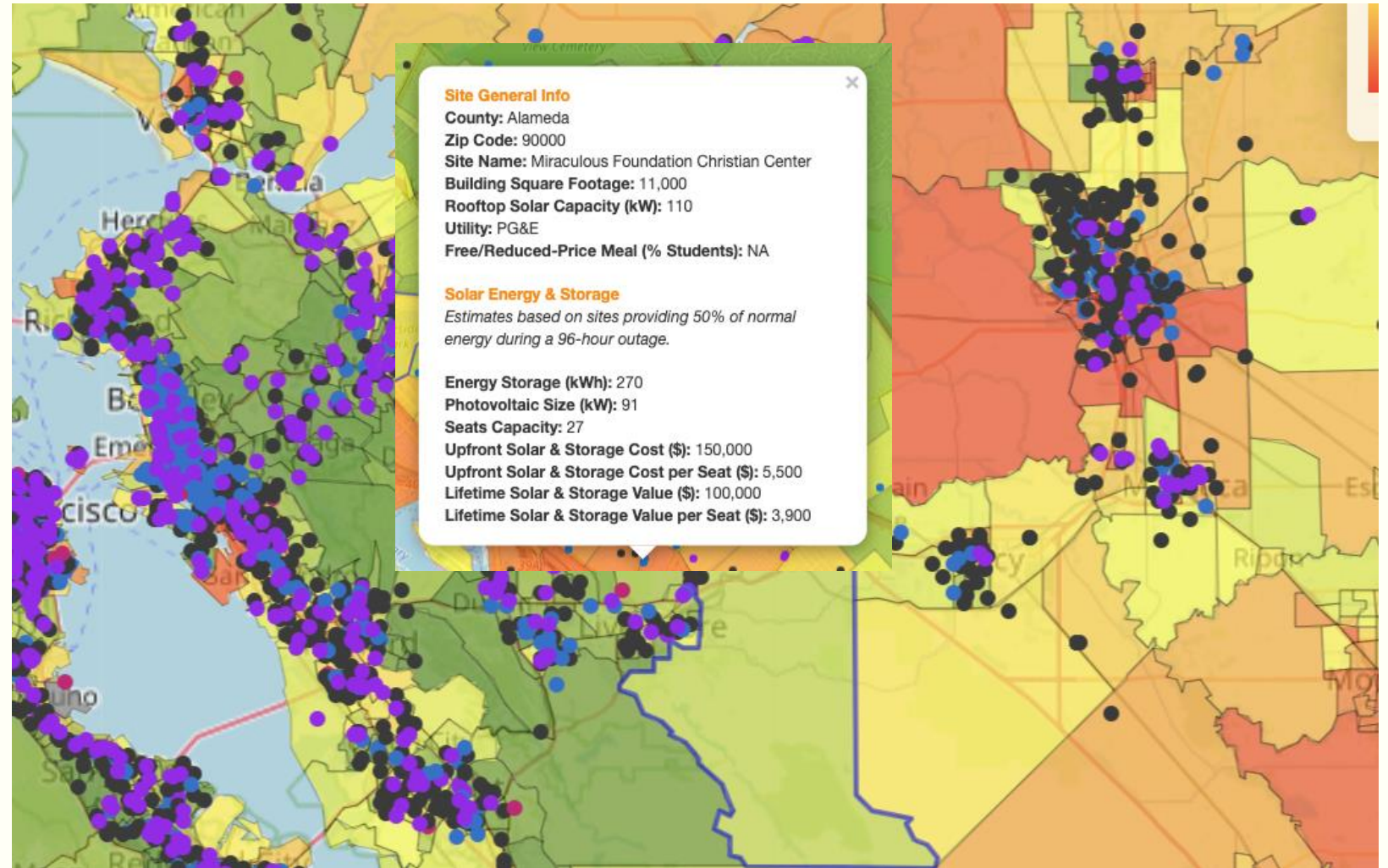


# Resilience Hub Facility types

Tools available to provide preliminary estimates for solar sizing and energy capability, example from PSE Healthy Energy

Potential RH Facilities
Churches
Park/Community/Rec Centers*
Libraries*
Schools
MF affordable housing complexes
Homes

\*Facility types in Ava Municipal Critical Facilities Program



# Who Benefits

Who uses a Resilience Hub
Everyone
Low Income Residents
BIPOC communities
Unhoused residents
Seniors
Immigrant residents (in language)
Local Residents (and businesses)
Members



Are Resilience Hubs open to anyone?

Resilience Hubs should be long term community investment



# Barriers to Resilience Hub Development and Operation

- Ava's Program setup to support development of resilient energy services (Solar + Battery) for Resilience Hubs through Community Innovation Grant, Technical Assistance and Incentives

<b>Barriers to Resilience Hubs</b>
Community Organizing
Funding to support RH operation
Technical Support
Solar and Battery installation
Identifying Sites
Program Management
Local Training on value of RH





# Program to deliver Community Resilience Hubs

## Community Grant(s) (\$300k)

3-year grant term with CBO(s)

- Case Studies
- Resilience Hub definition
- Community Engagement
- Site Identification
- Feedback on value of Technical Assistance
- Work with Ava to add services if needed to facilitate RH development

## Technical Assistance (\$2M)

5-year term, multiple parties

- Resilience hub site constraints
- Site Review
- Preliminary System designs
- Bid Reviews
- Grant writing assistance

## Solar + Storage Incentive

- Budget from 2023 surplus
- Incentive levels TBC
  - Upfront incentive + Ongoing incentive for batteries w/ ongoing monitoring through DERMS platform
- Residential & Non-Residential
- Higher incentives for CARE/Resilience Hubs

Issue RFPs in March, Initiate work in June/July

April BOD Approval



Definition of Resilience Hubs	Who do you serve?	Do you currently have a Resilience Hub (RH)?	What services do you currently provide?	What emergency services do you currently provide?	What non-energy resources do you need for your RH?	Do you have a site for a microgrid?	Would you like to organize towards getting a site for microgrid?	What other energy resources do you need?	Do you have ideal locations in the community you serve for microgrids?
	East Oakland community members	No	Monthly community meetings	Resilience supply distribution	Not sure	Possibly, East Oakland Apt. complex, 100 Hegenberger (would need to organize with other tenants in the building)			
Community spaces that can include buildings or facilities, community spaces, neighborhoods, or individual residences that support community members before, during, and after natural and climatic disasters. Resources can include, but are not limited to access to fresh food and clean water, hygiene facilities, community gardens, community transportation, renewable energy and energy back up/storage, community events including concerts, events, etc.	Low-income, BIPOC, high school youth ages 14 - 18 in impacted communities dealing with intersecting environmental and social injustices.	no	Annual 6-week Introductory Summer Climate Justice Leadership Academy for Oakland and Contra Costa County youth; Advanced Level Schoolyear Fellowship for youth who have participated in our Summer Academy.	none	Food + water, access to fresh produce including gardens, personal hygiene equipment/facilities; transportation, bike rentals, heating and cooling, community activities (games, tutoring, events, etc)	no	no, but would be down to support campaigns for others and get youth involved!	renewable energy, solar storage and battery backup	Tassafioranga Park; Oakland 81st Ave Library; Oakland Coliseum; DeFermery Park; Pinole Valley High School (just a brainstorm and places youth have mentioned)Ta
Place of refuge and source of essential supplies in face of any community disaster	Mostly Jewish-identified or allied folks of Alameda County and beyond.	No. Although we do have a space used to temporarily house immigrants and refugees.	All services you might expect of a synagogue to its members as well as the refuge mentioned and a collection depot for items needed by homeless people in our area.		Unclear at this time	don't know			
	Membership based but also support frontline communities	No	Climate, climate justice, and energy justice advocacy and support						
	The multi-family/multi-meter housing/energy community	No	Policy advocacy (regulatory and legislative) and expertise to expand local renewable energy resources						
Working on our definition	East Oakland Community + Oakland, families, individuals housed and unhoused, BIPOC	Yes, 7800 MacArthur Blvd.	Mutual Aid, Food and Supply distribution, Economic Empowerment, Wellness Resources	Mutual Aid as we have resources to distribute, Warm items and waterproof items as well as water and food.	Food, Supplies, Water, Tents, Tarps	Yes	potentially	Unsure	Unsure
	Asian immigrant and refugee communities	Yes		Lincoln Rec will eventually have back up power for refrigeration, HVAC heating and cooling, access to hot water, overnight facilities, and community emergency response trainings in language	Public health info in language, age & culturally appropriate programs (in language), for youth and seniors), opportunities to build expertise around governing clean energy, community planning		Yes		Yes, but exploring more. Would like to include other community serving public and private institutions - OACC, AHS, as well as network of apartment buildings including land trust properties
I like APEN's definition: Trusted community spaces where community members can access services for disaster response and recovery, as well as "to gather, organize, and access resilience-building social services on a daily basis." Rooted in the following pillars: ** Preparing vulnerable community members for extreme weather challenges: ** Becoming a Model for Climate Solutions: Resilience hubs can directly address the Climate Crisis by prioritizing renewable energy, zero waste systems and other green building practices and programming to showcase climate solutions. ** Building Trust and Relationships to Strengthen Community Cohesion: With crime, racism, bullying and everything else related to our social systems unraveling on the rise, resilience hubs can serve as safe and inclusive places, with opportunities for community members to build and strengthen relationships.	Bay Area; online resources are for everyone. I worked in East Oakland for 8 months. Based in Berkeley.	no	Serving as a "think tank" for resilient places - hubs, spaces & neighborhoods. Creating workshops to support the development of hubs. Helping to broaden the definition of resilience hubs -- how to support the smaller capacity sites, through funding and training. Also have a website which is collecting projects, cases studies & stories about r places. Consulting on helping to develop r rub. Focus on schools as resilience hubs (writing a report with StopWaste).	n/a	n/a	I know of lots of sites who could benefit from funding for a microgrid.	maybe	n/a	n/a
A faith-based Resilience Hub is a House of Worship designed to help congregants and their neighborhoods prepare for and recover from climate disaster by providing safe hospitality, clean energy through solar panels and battery storage, clean air through air filtration, and so many other critical resources needed when disaster strikes. Power outages, wildfires, earthquakes, flooding, and so many of the terrible effects of climate change are here: we need to prepare ourselves, our loved ones, and our communities.	East Oakland residents around the RH	The Ethiopian Evangelical Church	Solar, Battery power, & air filtration, cool space	Back up power, clean air, cool space	Spiritual resilience, community engagement space				
USDN summary - Community-serving facilities and spaces where community members can access services for disaster response and recovery, as well as gather, organize, and access resilience-building social services on a daily basis.	Community based climate/EJ orgs, contractor groups, and health systems in the nine county region, focus on SF and East Bay						would like to connect with sites that are pursuing microgrids and hubs as many of our partners are interested in providing funding, resources, support, etc.		
Similar to USDN above but especially, before, during and after a crisis	EJ communities Hyper local (city level)), local/regional Alameda & San Joaquin Counties, Statewide	We have a potential site	education and organizing to influence policies and programs towards resilience	advocacy to decision makers	education on DIY supplies	potential multi-affordable family housing complex	yes, this is what's needed in order to get what we need	air filtration, cooling/warming centers	housing complex

Definition of Resilience Hubs	Who do you serve?	Do you currently have a Resilience Hub (RH)?	What services do you currently provide?	What emergency services do you currently provide?	What non-energy resources do you need for your RH?	Do you have a site for a microgrid?	Would you like to organize towards getting a site for microgrid?	What other energy resources do you need?	Do you have ideal locations in the community you serve for microgrids?
We support community-led definitions of hubs that serve their resiliency needs. Also, would like to see hubs that do the following: provide health information regarding climate, air and other pollution, benefits of electrification; include clean air during wild fire red-air quality days; cooling to protect residents from extreme heat which is the most deadly weather event; provide support for emergency water heater replacement and help to replace gas heaters with electric; and resources to help with an equitable transition to electrify homes, particularly to help families with asthma to replace their gas stove (which can trigger asthma) with an electric stove. Hubs can be so much more, but these are some areas we are most concerned with. Park community buildings and libraries could all be electrified and become resiliency centers. And of course, we live in earthquake country and should think about how these hubs would help when the Big One hits.	Health professionals, advocates, students, and communities	No, but we are on advisory committee for the SF Bayview Hunters Point Climate Equity Hub, (not in AVA territory) which may consider a micro-grid in the neighborhood at some point in the future.	Health focused education and policy support: Health harms and benefits of building electrification and a just transition to electrification, including addressing health inequities often caused by policies such as redlining, need for affordable electricity to protect health particularly during deadly heat waves, as well as policy advocacy on local and state levels, and for other nonprofits in BE movement.	NA	NA	NA	We could support a project with health information.		
	While we exist for the mutual benefit of our Cooperative Members, our mission is to enable everyone to own and shape our energy future through our People Power Members.	Check out <a href="#">OakTREE</a> , which allows community members to have control of local heating and cooling in a form of a Thermal District Energy System (aka Thermal	Technical viability of this Thermal Microgrid	Battery Collective		Yes			Yes
	union electricians and apprentices		We work with OUSD and pre-apprenticeship programs on career paths						Possibly
	low-income, BIPOC, EJ communities, spanish-language speakers, youth	No							
A filtered air and cool shelter open during days of extreme heat, power loss and polluted air days. Including refrigeration to store medication, charging stations for wheelchairs and other medical devices, and phone chargers.	Residents of West Oakland	No			Electrified HVAC	No	maybe	solar and batteries	Not ideal, but a possibility including all buildings in Preservation Park.
more discussion of resilience hubs, community solar and microgrids		No	information from other CCAs in Bay Area and statewide re best practices, regional goals, technological innovations, regulatory and legislative initiatives						

Response #	Who utilizes a Resilience Hub?	How does a Resilience Hub serve the community? What services are offered?	How does a Resilience Hub serve the community during an emergency?	What is the size of a Resilience Hub? What type of building would host a hub?	What are the barriers to creating Resilience Hubs? What does a community need?	What are the ideal locations for a Resilience Hub?	Do you currently know of locations for potential Resilience Hubs? If so, how many?
1	The public	medical services, immigration services, social services, food pantry, workshops, tiny home project, gathering space	warming shelter, cooling center, essential communication, resource distribution	ranges from churches to non profits to neighborhood groups	Capacity at the community organization level is a big barrier. There isn't enough leadership / capacity to devote time to this and/or people who have the expertise to immediately jump into a project without training and education.	Within DAC census tracts or proximity to one. Ideally would be accessible by transit.	<a href="https://www.sanleandro.org/1173/Hub-Sites-in-San-Leandro">https://www.sanleandro.org/1173/Hub-Sites-in-San-Leandro</a>
2	Members of the community - residents or visitors/commuters	Shelter, after earthquake: food distribution; place to charge EVs and power home (V2H); charge cell phones	see above	community center, libraries, places of worship	Public and organizational awareness regarding the need for community resiliency centers, funding	see above, buildings with adequate restrooms, parking, centrally located, accessible	churches and temples in fremont; fremont community centers
3	Residents and Businesses in a geographic area. Community members who require additional information on opportunities to obtain assistance or resources to be more resilient in their home and community; a place in case of an emergency and is communicated as a space to charge devices and get needed help.	A managed resilience hub can offer electrical power to utility customers who are not necessarily near an environmental (ie. flood, fire, service breakdown) event. It breaks the electrical grid down into more manageable divisions. In addition, it improves state security in the event of a terrorist attack on the electric grid. It is a dedicated resource hub to assist and inform in person, where needed, to gather information and resources to be more resilient in the community; will be a place for learning in person and facilitating on-going concerns with access to clean energy and/or jobs that support this industry.	Electrical services can be accessed for a much larger area of population in the case of a forced shutdown of electrical services. Today, if a fire threat occurs, hospitals, service facilities, computer data centers, and other essential community building services can lose important functionality during a stressful event.  It is a place that is partnered with the City, County or other local government for resources from power banks, charging stations, warm centers and other CBOs to assist at that time.	This would be a calculation based on the possible generation for the geographic area, the demand of the grid serviced, a score of what essential buildings are participating, and an overall geographic look at reducing line loss (eg. remote areas that house fewer buildings.)	Infrastructure (batteries, distribution tech) and management, investment may be large, - but may eventually this may be offset with still being able to sell electrical services for longer, less interrupted periods of time.	Areas of good renewable supply, areas of high community importance, and then everywhere possible when the time comes.	To start, areas of high risk for fire.
4		It is a local community center where people gather for socializing and community gatherings. Services are available for people who need help with food, health, support navigating social services and general advice.	Provides emergency power for medical devices, phone charging, shared freezer and refrigeration space, and possibly portable batteries to run equipment at home. The space would also provide clean air during smoke emergencies.	1500-2000 square feet.	Overhead, dedicated space, lease support and on-going program management.	Walkable, Bikeable, BARTABLE and with parking and a reliable and safe place.	3-4
5	People from the local neighborhood.			It would be a local gathering place such as a church, an elementary school, a senior center, or a community center.	Technical advice on how to set up a microgrid and financing to build it out.  Funding is a huge barrier, especially for the costlier infrastructure like solar with battery backup or a microgrid. Hubs also need small pots of money so that they simply start to work on projects to support programming and events, such as a community visioning session. Communities need flexible funding - this is why I have always advocated for an intermediary fund for the smaller funds, pooling both private and public dollars, to distribute through an easy grant application to sites. Besides funding, TRAINING is crucial. Workshops which introduce organizations to what hubs are, to specific projects and events (like community visioning sessions), workshops that are for specific types of hubs (ie, workshops for libraries or for community centers). Communities also need a NETWORK or a COALITION (run by both govt and nonprofits), so that they can connect and be of support to not just the other resilience hubs, but also the other organizations and companies who are supporting the sites. They need both online and in-person opportunities to connect and learn from each other. Communities need not just sites with off-grid power, but sites offering HOLISTIC programming and services (from mental health to food). Communities need not just the site itself, but the mutual aid - the community engagement in which individuals are going out into the community (away from the hub) and supporting the unhoused and other vulnerable populations.	see above	I don't think so.
6	Resilience hubs should prioritize frontline communities and vulnerable populations, such as the unhoused, seniors and lower-income individuals. That being said, often times community members who are aren't considered vulnerable often use the sites during the day-to-day programming (ie, when there is no disaster). For example, a church developed as a resilience hub might be used by church members who are not vulnerable, but during disasters other community members really needing support would likely use the site more.	Resilience hubs are simply trusted sites in the communities - from community centers to schools to places of worship - which are augmented to support community members during disasters. They also should be living learning laboratories for climate solutions - with eco-friendly and climate resilient infrastructure and programming. They should also serve the community as a place where EVERYONE feels welcome, where people feel like they belong. They should be offering the typical services at the site, as well as programming and services that is resilience-based. For example, a community center could offer food distribution, while a health clinic could offer workshops about extreme heat. They could also offer wellness workshops and programming, as well as disaster preparedness training workshops. These services should be HOLISTIC and geared toward what community members want and need (in addition to the programming that the site already has, before becoming a resilience hub).	It really depends on the capacity of the site and the emergency itself, but here are a few ways they could serve the community: ** As a cooling or warming center during extreme weather (heat, cold or atmospheric rivers), as a place where supplies are distributed, where information is disseminated about the emergency, especially between CBO's and local governments. If there is off-grid power, the site could serve as a place where people could do to power up their phones and store their food, if needed. It could also store emergency supplies for other CBO's to distribute if there is space. If there is space, it could also serve as an emergency shelter (though not all resilience hubs will have that capacity). If there is a community kitchen, it could serve people food. Depending on people's wants, it could also support trauma-informed care, such as massage, acupuncture or mental health counseling. After an emergency it could serve to disseminate information about disaster funding.	It really depends! We need a variety of types of sites serving different purposes. I prefer the MANY sites vs. just one centralized site. WHY? One of many reasons is that many vulnerable populations don't have the capacity to travel great distances; this is why we need many sites in communities. I think that small sites could serve as hubs, but just knowing that they will have less capacity than bigger sites. Bigger sites like community centers could be more of the central hub, while the smaller sites could be the "satellite" hubs. I think that community centers are great as hubs - both private and public sites. Libraries make good hubs for specific purposes (cooling & warming centers, specific types of programming), while schools are great for programming with kids and could serve during catastrophic emergencies as emergency shelters. Places of worship are also ideal because they are used less and often have a nice plot of land + most are paid off.		Ideally in an underserved community, served by transportation. But the sites which WANT to become hubs - or which already have resilience-based programming - are the ideal sites!	There are many existing sites which already are functioning as low-level resilience hubs. Start with them! Many places of worship, for example, which Interfaith Power and Light is working with, are these sites. As well, Castlemont High School is another potential location. West Oakland has already been working with WOEIP for a number of years to develop one. PLACE for Sustainable Living and Omni Commons in Oakland are private locations which sometimes have functioned as resilience hubs. In Hayward, we are currently fundraising to build one in South Hayward ( <a href="http://www.stackcenter.org/">http://www.stackcenter.org/</a> )
7	Could be any community member, but more likely it will be disadvantaged community members. We should be ready to serve non-English speakers.	Services should include: a place to get out of the heat or cold or poor air quality, charge a phone, access to a computer with internet, get access to services that are offered by the City, County and non-profits; and access to food.	In addition to the above, it should offer basic first aid services, food, water,	The size of a community center or a library.	Staff capacity, funding, support from elected officials, support from community partners/non-profits.	Existing libraries and community centers. Surplus schools.	

Emergency Services
Heating/Cooling
Charging Center/Communications
Food/Water Distribution
Clean Air/Air Filtration
Health Services
Electrification Support
Medicine storage/distribution
Community Garden
Disaster Response Information

Potential RH Facilities
Churches
Park/Community/Rec Centers*
Libraries*
Schools
MF affordable housing complexes
Homes

Non-Emergency Services
Community Meetings
Sustainability/Climate/Equity trainings
Religious Services
Homeless Support Services
Food distribution
Health Services
Resilience Hub Training
Heating/Cooling Center
Workforce Development

Barriers to Resilience Hubs
Community Organizing
Funding to support RH operation
Technical Support
Solar and Battery installation
Identifying Sites
Program Management
Local Training on value of RH

### Barriers to Resilience Hubs

Community Meetings
Sustainability/Climate/Equity trainings
Religious Services
Homeless Support Services
Food distribution
Health Services
Resilience Hub Training
Heating/Cooling Center
Workforce Development

Who uses a Resilience Hub	Count
Local Community	10
BIPOC Community	5
Everyone	5
Communities of Concern	4
Students	4
Low Income Residents	3
Unhoused Population	3
Members	2
Immigrant Communities	2
Faith members	1
Health Professionals	1

### Who uses a Resilience Hub

Everyone
Low Income Residents
BIPOC communities
Unhoused residents
Seniors
Immigrant residents (in language)
Local Residents (and businesses)
Members