



# **Boyle Heights Resilience Hub Project**

CA Resilience Challenge

Final Grant Report

**November, 2023**

This project and report were produced with funding from the  
California Resilience Challenge

## **Executive Summary**

The California Resilience Challenge grant received by USGBC-LA directly supported the development of the Boyle Heights Resilience Hub in Boyle Heights, a low-income, largely Latino community surrounded by freeways and highly affected by climate impacts. Along with partners at the City of Los Angeles and The American Red Cross, USGBC-LA is assisting the Boyle Heights Arts Conservatory (BHAC), an important community organization located in the heart of the neighborhood, to become a remarkable new resilience hub for the community. The Boyle Heights Arts Conservatory is a gathering place that includes a volunteer corps with leadership structures established and provides indoor and often outdoor meeting space for gathering, shelter, and the gathering/distribution of information, supplies, and emotional support. In addition, the conservatory hosts a radio station with local programming relevant to the community and shares a space with a large venue that can be used for staging. A resilience hub is a community center enhanced with infrastructure that can stay online and adapt its programming in response to shocks like heatwaves and other disasters. In addition, after a major shock or stressor, the hub can serve as somewhere to gather to plan recovery that has built-in volunteers and built-in trust with the community. As part of this project, USGBC-LA and its partners have been providing physical improvements for the hub like air quality monitors, first aid kits, water storage and filtration, and resilient outdoor spaces, as well as collaborating with the implementation of a resilient power system that can stay online and adapt its programming in response to shocks like heatwaves and other disasters.

In addition to the physical infrastructure being installed at the hub, two community workshops were delivered to community members on how they can best aid each other and take advantage of the hub's resources so the hub can be an effective part of Boyle Heights' resilience ecosystem, as well as a CPR Demo session and a full CPR certification training and First Aid in delivered in partnership with the American Red Cross.

Another important milestone for this project is the implementation of an operations manual for the Hub. Our team has been working in partnership with the Climate Resolve, providing volunteers and youth to map assets and vulnerabilities around the hub, as well as assisting with research to develop a comprehensive operations manual for a multitude of disaster and disruption scenarios. A final draft has been reviewed by all partners and it's about to be released by the end of this year. The document will serve both as a reference for current staff, as well as a training resource for new staff.

By providing an asset of community resilience, the Boyle Heights Resilience Hub will be exhibiting leadership in community resilience that can be scaled into other disadvantaged communities. Bi-weekly meetings with partners have been held to discuss progress as well as opportunities for future collaboration in other parts of the city leveraging the model for creating resilience hubs in disadvantaged communities.

## Key Personnel

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## Table of Contents

Executive Summary	2
Problem Statement	4
Project Description	4
Project Results and Next Steps	5
Participating Stakeholders and Scalability	9

## **Problem Statement**

Climate impacts affect all communities, but they do not affect communities equally. Redlining, white flight, community disinvestment and other racist practices have created disparities in tree canopy, healthcare access, asthma rates, park access and more. By re-investing in communities of higher risk and/or higher vulnerability, such as those with higher density, older building stock, lower income, fewer community and public assets, we can help communities help themselves as well as augment limited public resources that are always stretched thin – especially in an emergency. The community space for this project is located at the Boyle Heights Arts Conservatory, in a neighborhood with half the average tree canopy coverage and a great deal of asphalt coverage, according to Tree People's Los Angeles County Tree Canopy Map Viewer. Both of these greatly increase the impact of the urban heat island effect on the community. For this pilot project, at the proposed locations, the specific climate challenge being addressed is extreme heat.

## **Project Description**

Proceeds from this grant were applied to support physical improvements like air quality monitors, first aid kits, water storage and filtration, support for resilient power systems and resilient outdoor spaces. Another part is the community resilience capacity building through outreach, workshops and training sessions. In order to achieve our goals, a few milestones have been established including:

- The implementation of air quality monitoring technologies to inform the management of building systems to minimize the risks posed by both indoor and outdoor sources of air pollution;
- Installation of backup water storage systems and filtration;
- Development of green space for natural air purification, mitigation of urban heat island effect, and beautification of outdoor space;
- Provide emergency supplies that may be needed in the event of a climate-related disaster;
- Public engagement/training campaign for local community resiliency capacity building;
- Collaboration with the implementation of an Operations Manual/Staff training - Hub Staff will meet regularly with the project team to discuss hazard scenarios and plan procedures and protocols for response.

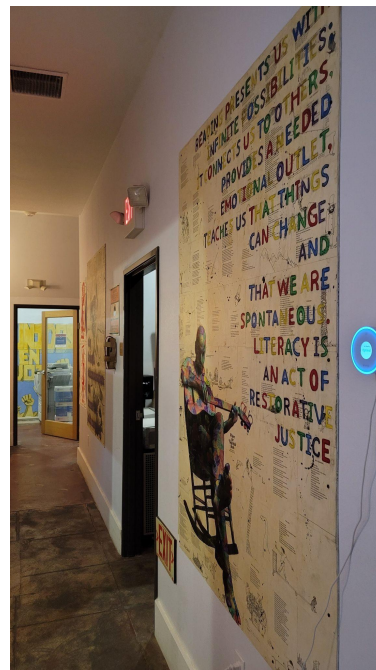


## Project Results and Next Steps

Proceeds from this grant have been used to complete the project milestones, including:

- Implementation of air quality monitoring technologies:** In partnership with Wynd, two (2) indoor air quality (IAQ) sensors ([Wynd Halo Pro model SpecSheet](#)) have been installed on-site in strategic places on the two floors that the Hub operates to capture information on the level of pollutants: particulate matter, volatile organic compounds, and carbon dioxide. Both sensors display real-time results on-site and are publicly available on our website at <https://www.wynd.ai/site/bhac>.

In addition to monitoring indoor air quality, one (1) [Wynd Max air purifier](#) has also been installed on-site in the community room to remove germs, allergens, dander, smog, and other harmful particulates.

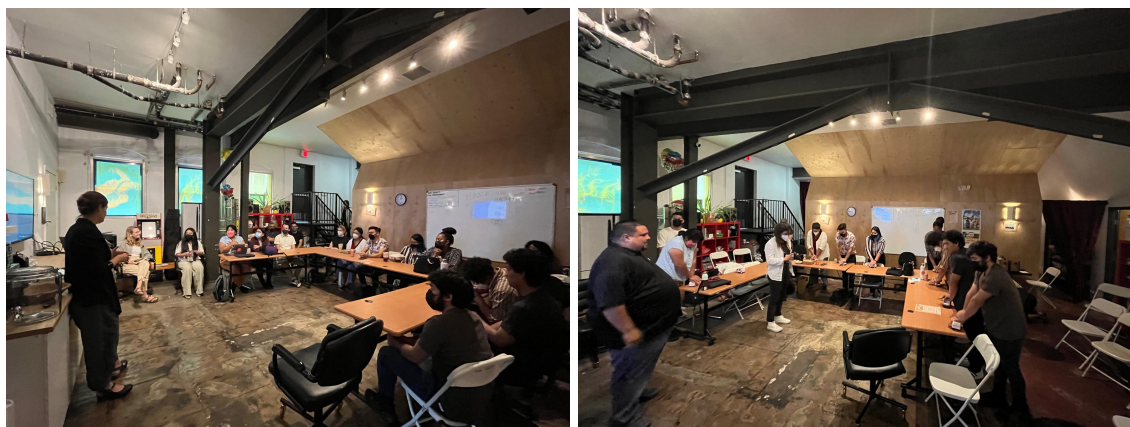


A second part of this milestone is the installation of an outdoor air quality sensor (OAQ), which has been installed on the roof to capture data on the particulate matter levels that can also affect indoor air quality. The selected OAQ sensor is the [Purple Air PA-II](#) with real-time results displayed online at: <https://map.purpleair.com/1/mAQI/a10/p604800/cC0#11.14/34.0417/-118.2065>

- Installation of backup water storage systems and filtration:** USGBC-LA has facilitated a partnership between Climate Resolve and ARUP to deliver this milestone. A building walkthrough and structural assessment have been conducted to determine the type of water storage system to be installed considering site constraints, construction budget, and regulations. The assessment determined that the installation of rain barrels would not be possible due to the limitations in the lot size and distancing from the building as required by the local building code. The alternative option is the installation of an indoor storage tank that will be in constant use with potable water eliminating the need for a filtration system and issues with stagnant water. The Climate Resolve team is currently working on the specifications for the tank and pump system to submit for approval by the local utility - Los Angeles Department of Water and Power (LADWP). The most recent design intent for the water system can be found here: [Plumbing Markup](#).

- **Public engagement/training campaign for local community resiliency capacity building:** To achieve this milestone, USGBC-LA through its current partnership with ARUP and its Resilience team worked in collaboration to customize the existing resilience capacity building training delivered to our community in the LA region for the past 6 years, and make it more relevant to the Boyle Heights community and the hub and local partners staff. Two resilience workshops have been delivered in the past year, with the first workshop hosted in person at the Boyle Heights Arts Conservatory on August 4th, 2022, and the second workshop, also in-person, on January 28th, 2023.

The first workshop in August 2022 was structured to be delivered in 2 parts of 90 minutes each, with the first part hosted by Arup and focused on providing participants with real-world examples and strategies for understanding and supporting team building and community engagement as a key component of resilience; and the second part hosted by The Red Cross covering emergency preparedness and a CPR demo. A total of 22 participants, including representatives from the local community, including Promesa Boyle Heights, ELACC, Inclusive Action for the City, Eastside Leads, Libros Schimbros, Inner City Struggle, Self Help Graphics joined the Boyle Heights Arts Conservatory staff to attend this first Resilience Capacity Building training.



Heather Rosenberg (Arup) and Guillermo Sanchez (Red Cross) presenting at the Resilience Capacity Building Workshop on August 4th, 2022.

The second Resilience Capacity Building workshop happened on January 28, 2023 also with a presentation from Arup on community resilience strategies and engagement, and the Climate Resolve team presenting the Operations Manual developed for the Boyle Heights



Resilience Hub, its components and how the community can use the available resources at the hub in case of emergency.



The workshop was held in two sessions of 90 minutes each with the participation of local community organizations, the BHAC staff, representatives from UCLA, the City of LA, including the Chief Heat Officer Marta Segura, who was able to bring some real examples from other community centers around the City and valuable information about existing resources, such as the [Cool Spots LA app](#) and the [Climate Equity LA](#).

We were also able to help with organizing and promoting a CPR Certificate Training and First Aid hosted by the Red Cross for the resilience hub staff and community members on December 12th, 2022. A list of certificates issued to the participants can be found [here](#).

- **Collaboration on the implementation of the Hub Operations Manual:** USGBC-LA has provided support through our Green Building Corps (GBC) program with a few of our interns working on the development of the Operations Manual under the supervision of the Climate Resolve team, our partner and manager for this deliverable. A [final draft of the Operations Manual](#) has been distributed by Climate Resolve among the partners for review and discussion. The implementation of the manual including hub staff training is planned for 2024, once the physical improvements are fully implemented.

In addition to the support provided for the Hub Operations Manual development. Our GBC interns have helped with research on resilience hubs procedures and protocols as well as mapping local assets in the community and potential partnerships to create a local [Resource Map](#), which is now available online. Our partner Climate Resolve is currently working on outreach to local community organizations for engagement for the Boyle Heights Resource Map, including a social media toolkit for these organizations to post on their channels. They are also planning on having a physical map displayed at Bus Shelters within Boyle Heights. The bus shelter ads will give access to the map to community members who may not have access to a mobile device or are not comfortable with technology.

- **Provide emergency supplies that may be needed in the event of a climate-related disaster:** A full CPR training certification and first aid training was held at the Boyle Heights Resilience Hub in December, 2022.

USGBC-LA provided first-aid kits designed to treat common injuries including wounds, sprains, and burns, as well as personal protective equipment (PPEs) to be stored in hub and available in case of emergencies. Other supplies provided through this grant include batteries and portable charging devices to be kept at the hub, as well as personal protective equipment (PPEs) such as face masks and gloves to be stored and available in case of emergencies. Below is a list of emergency supplies provided by USGBC-LA to be kept in storage at the hub for emergency use:

Item	Qty
<a href="#">Uline first aid kits (ANSI approved)</a>	100
<a href="#">Portable power banks</a>	2
<a href="#">Nitrile Gloves</a> (1 Medium & 1 Large)	200
<a href="#">KN95 Masks</a>	200
Narcan overdose emergency treatment	10
Fentanyl Testing Strips	100

- **Development of green space for natural air purification, mitigation of urban heat island effect and beautification of outdoor space:**

The Boyle Heights Resilience Hub was selected as the USGBC-LA's sixth Environmental Justice (former Legacy Project) in 2021 and since last year our team has been working with the hub team to promote green spaces within their premises by assisting with landscaping services and organizing volunteer days for tree planting. We identified the need to re-plant some of the trees and reassess plant placement in the building surroundings due to the limitations of unpaved space within the building premises. The solution we found to help promote the development of green and mitigation of the urban heat island effect in the neighborhood so poorly shaded was to co-host a







tree adoption event in partnership with Climate Resolve and LA City Plants program. The event was held on July 22, 2023 and with the help of our staff and volunteers, we were able to distribute 77 shading trees to the local residents of Boyle Heights, along with instructions on planting and maintenance. A full list of trees distributed and recipients' addresses can be [found here](#).

## Participating Stakeholders and Scalability

The USGBC-LA team has been meeting with the hub partners, The Climate Resolve and The LA City Chief Resilience Officer, on a bi-weekly basis throughout the term of this grant to discuss progress and opportunities for further collaboration, including the potential for replicating this resilience hub model in other underserved parts of the city affected by climate challenges similarly to the Boyle Heights community.

We were able to showcase and leverage our experience in developing the Boyle Heights Resilience Hub through partnerships with other local organizations. For instance, in April of 2023, in coordination with the Urban Landscape Institute (ULI), we hosted a Technical Assistance Panel (TAP) with the participation of key stakeholders to develop a plan for creating a network of resilience hubs and resources throughout Los Angeles' most vulnerable neighborhoods. The participants of the two-day TAP workshop included real estate and land use professionals, planners, urban designers, and resilience experts who met at the Boyle Heights Resilience Hub to discuss a concept for developing and scaling “resilience ecosystems” made up of resilience networks, hubs, and resources. The TAP evaluated the potential components of a resilience network, incorporating known resources such as existing resilience hubs, an operations manual, training content, and community engagement to develop a model for enhancing community resilience. The final TAP report was released and presented at a workshop in June 2023 and is available on [our website](#).

Another important milestone achieved that happened in parallel and helped leverage the resilience hub and its importance among the local community was the creation of the “Interconnected Relations Mural”, in partnership with the Boyle Heights Arts Conservatory (BHAC) artists. With the support of The Energy Foundation, USGBC-LA worked with BHAC to design and develop a mural envisioning the clean energy future of the Boyle Heights community. The mural focuses on themes around climate change, environmental justice, and equitable transition to a more sustainable future for the community residents. The mural is placed on

modular aluminum sheets that can rotate and be installed at the BHAC facility and other locations throughout the City as a way to raise awareness around these clean energy themes and the resilience hub as a place of refuge in the event of climate disasters. Mural Design Workshop Sessions were held with local artists from BHAC, Boyle Heights community members, resilience hub working partners, Working as much as possible with local artists will ensure that the mural is a reflection of the community itself.

The Mural Unveiling and Ribbon Cutting event took place at the Boyle Heights Resilience Hub with the participation of over 110 attendees from the local community and it is in rotation currently in different parts of the city, including exhibits at the Beehive in South LA, the La Kretz Innovation Campus in the LA Arts District, the Metropolitan Water District building by the LA Union Station, and the latest stop at the USC Sustainability Hub in South LA.



Interconnected Relations Mural: Envisioning a Clean Energy Future for Boyle Heights

In addition to continuing to pursue funding and partnerships to expand and replicate the resilience ecosystem planning framework across the region, USGBC-LA has been actively participating in meetings, workshops, and roundtables in Southern California to showcase the Boyle Heights Resilience Hub project, discuss lessons learned and the pathway for creating a community resilience ecosystem model.