

AFTER THE FIRE
RECOVER. REBUILD. REIMAGINE.™

2024

AFTER ACTION REPORT: MAUI DEPLOYMENT, DEC. 3-8, 2023



After the Fire USA

1/1/2024

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Acknowledgments

We are grateful for the opportunity to share our perspective, observations, and recommendations in this report. The primary audience for this report is the people of Maui and organizations serving this community. However, we have made every effort to create a useful report for external stakeholders, many of whom may not be familiar with the complexities of the Maui Fire recovery. Therefore, we have included historical concerns in this report to provide context.

This report will be made publicly available on or before the six (6) month mark post-fire. We acknowledge that the space of disaster moves very slowly and quickly – it needs to shift and pivot. It will be at least 2-3 years before recovery hits a stride.

After the Fire USA will publish our findings every six months to assist in this recovery. We want to express our gratitude to the members of our delegation to Maui for their compassion, contributions, volunteerism, and continued contributions to our work on Maui. We take full responsibility for the contents of this report as we acknowledge the collaborative nature and inclusion of diverse opinions here.

Finally, we would like to thank the remarkable people of Maui for allowing us into your community at this most vulnerable and delicate time after the fire. We understand the trust given and feel humbled by the experience. As one delegate said, “Maui is a small town millions choose to visit. We’d do well to remember it belongs to the people of Maui first and foremost.”

We wholeheartedly agree.

Jennifer Gray Thompson, MPA
CEO, After the Fire USA

This report is made possible by the entire Maui delegation, a group of incredible people united by their compassionate service and deep sense of humanity who volunteered for this mission with the shared goal of service to the greater good.




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Reina Arai Pomeroy, Marshall Fire Survivor - Total Loss (2021)
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Superintendent, Achieve Charter Schools of Paradise
Tennis Wick, Director, Permit Sonoma

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About Us: After the Fire USA

"We advocate, educate, and collaborate to address the Era of Megafire."

We were born on October 11, 2017 amid the first massive megafire in modern times: the North Bay Complex Fire, in the San Francisco Bay Area. This megafire spanned Sonoma, Napa, Lake, and Mendocino counties, took 43 lives, 8900 structures, and cost over \$14B. A month later, the Thomas Fire erupted in Ventura and Santa Barbara Counties, becoming the largest wildfire in modern California history.

Thirteen months later, on November 8, 2018, the Camp Fire blew through the town of Paradise, California, destroying 18,000 buildings and killing 85 people. On the same day, the Woolsey Fire tore through Ventura and Los Angeles County, destroying 1643 homes and killing three people.

The Era of Megafire had arrived. In response, After the Fire, known as Rebuild North Bay Foundation, began paying our lessons forward and knitting together megafire communities from several counties and regions.

As survivors, we recognized this was a pattern, not a series of events, and we knew we had to help newly fire-affected communities recover, rebuild, and reimagine – and for the long term. Since then, our work has expanded into Oregon, Colorado, California, and Hawaii. We actively work with megafire communities as recent as the Maui Fire (2023) and as long-term as the Tubbs Fire (2017) and Camp Fire (2018). We go where the megafires go.

At After the Fire USA, we support communities as they navigate the recovery journey, rebuild their lives, and envision a more resilient future. We believe in the power of prevention, innovation, collaboration, and fostering connections between fire-impacted communities.

Advocate and Collaborate




Through advocacy and partnerships with our public sector allies, we provide vetted and accurate information to support community leaders in voicing the unique needs of their communities. Our platforms, including podcasts, publications, seminars, and workshops, allow us to share current perspectives and best practices for overcoming collective challenges. We are committed to bridging the gaps in support and resources that emerge after a disaster.

We take pride in leading collaborative efforts among the public, private, and nonprofit sectors to address the immense unmet needs that arise after fires. We understand that these burdens should not rest solely on the shoulders of our most affected and financially vulnerable residents. Our mission is to ensure that every family receives the attention and support they deserve until they return home.

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Reverse Engineering: Ask then Provide

We believe in putting the needs of the fire-affected community first. Our central question is simple yet powerful: "What do you need, and how can we help?" By actively listening to the voices of those affected, we tailor our initiatives to address specific challenges communities face on their path to recovery. We serve the community before us so they can better lead and design locally-led recoveries.

Long term Recovery, Resources, Coaching, and Networking

We know recovery and rebuilding require several years of structured determination from the community. It is a very long process, yet most nonprofits cannot stay engaged with recovery leaders and lawmakers, and the landscape continually shifts. We help leaders pivot and anticipate the next steps. Through engagement and listening, we can provide communities with experts, leaders, adaptable systems, tools, and a deep network of megafire leaders through our podcast, 1:1 coaching services, webinars, and annual Wildfire Leadership Summit in Sonoma, California. We stay with communities and welcome them into our network, where we ask them to share their lessons, learnings, best practices, and humanity with past and future megafire communities.

Paying it Forward

Not only does paying it forward help new megafire communities, but it also allows community leaders in recovery to realize how far they have come and see the value in their experiences. The truth is, no one understands the struggle better than those who have lived it.

Our Programs

Community to Community: Together, We Rise

Our "Community to Community" program connects established and emerging leaders from wildfire-impacted areas with peers who have gone through successful wildfire recoveries in other regions. By working together collaboratively, these leaders navigate the long, challenging road to recovery with invaluable support and insights. Through this program, we foster a sense of unity and empower communities to rebuild stronger than ever. Externally, we use what we have learned from frontline communities to help national organizations better serve the needs of megafire survivors and communities.

Megafire is a relatively recent crisis. We have never witnessed multiple megafires in just six (6) years. The federal government system is geared towards long-established disasters like wind and rain. Similarly, the space of philanthropy has not yet adapted to the needs of fire survivors, especially long-term. We help the public, private, and non-profit sectors better understand the landscape of megafire recovery and long-term rebuilding through education, advocacy, convening, coaching, and advisory functions.

Advocacy and Education: Empowering Fire Survivors & Communities

At After the Fire USA, our commitment to lasting impact extends beyond direct assistance. Through our Advocacy and Education program, we actively engage in federal advocacy delegations, working tirelessly on critical issues in resiliency, recovery, and improved public policy. We proudly represent and empower wildfire survivors and communities, forging connections with lawmakers, agencies, and changemakers who can drive meaningful change. We educate industries, private groups, public sector agencies, and lawmakers about megafire, especially long-term recovery.

National Platform: Megafire Expertise and Public Policy

Our CEO, Jennifer Gray Thompson, serves as a valuable voice for disaster response and reform. She plays an integral role as a Disaster Response and Reform Task Force member at the Bipartisan Policy Center, providing recommendations to Congress for a comprehensive Disaster Reform Bill. We understand the importance of solid leadership and advocate for policies that better serve our communities in times of crisis.

National Presence and Collaboration

After the Fire USA maintains a consistent presence at national conferences, actively representing issues of resiliency and recovery in the face of wildfires. Speaking engagements include keynote delivery at the US Chamber of Commerce Foundation Building Resilience through Public Private Partnerships, Fannie Mae, Texas GLO, Bay Area Open Space, Brownsfield National Conference, Smart Cities, Canadian Red Cross, and more.

We collaborate as consulting subject matter experts with esteemed academic institutions such as Stanford, UC Berkeley, USC, University of North Texas, University of North Carolina, and others. Through these collaborations, we assist local governments in navigating the challenges megafires pose and building resilience.

After the Fire USA invites you to join us in advocating for change and sharing knowledge. Together, we can shape policies, empower communities, and inspire resilience in the face of wildfires and other climate-based disasters. Let's work together to create a future where communities are prepared, supported, and ready to face any challenge that comes their way.



Purpose of After the Fire USA Deployment to Maui




In December of 2023, After the Fire CEO Jennifer Gray Thompson led a delegation to Lahaina to discuss post-disaster recovery strategies and to provide advice and support to the affected communities of Maui, Hawaii. It is the first visit to Hawaii for After the Fire and the four-month post-fire timing of this visit was intended to allow the affected community some time to recover before receiving this delegation.

After the Fire's goal for this delegation was to learn from Lahaina Fire survivors about the event, provide recommendations for what worked and what didn't in recent mega fires on the mainland, rebuild, to help bring communities together to achieve their individual goals in recovery, and to establish a leadership network across state lines. Members of the After the Fire delegation have experienced and recovered from devastating fires, similar to the survivors of the Lahaina Fire. This knowledge transfer builds a conduit for information on the recovery process between both parties.

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There are many layers to disaster recovery, and it is a process that takes years and coordinated effort to pass through. These communities' residents will face rebuilding challenges and must make important decisions that will help their lives return to a normal cadence after losing so much. After the Fire hopes to provide long-term support to the Maui Fire community and share best recovery practices to help survivors get back home more quickly.

Sadly, many parallels exist between the Lahaina Fire and other recent megafires.

In 2017, the Tubbs Fire in Sonoma and Napa Counties, CA, like the Lahaina Fire, was powered by intense winds, came with no warning, and over 6,000 properties in both populated residential and commercial neighborhoods in hilly areas with small, older homes.

In 2018, the devastating Camp Fire, fueled by strong winds and years of drought, in just a few terrible hours, overtook the town of Paradise in Butte County, CA, trapping residents without a way to evacuate. Ninety percent of the town of Paradise was destroyed, and 85 people were killed. While Paradise burned in Los Angeles County, the Woolsey Fire erupted later in the day. A lack of available resources, strong winds, and loss of power to communication channels caused the destruction of 1,600 structures and the loss of 3 lives in the coastal community of Malibu, CA. In 2022, powered by extreme winds of 100 mph, the Marshall Fire in Colorado devastated the towns of Superior and Louisville, destroying over 1,000 residential and commercial buildings and killing two people.

The Maui delegation was specifically curated to include survivors from these recent megafires and experts on various critical subjects to help guide government officials, community organizations, and fire survivors on Maui with recovery.



Maui Delegation and Biographies

Jennifer Gray Thompson, MPA, Founder & CEO, After the Fire USA; Executive Director, Rebuild NorthBay Foundation; Bipartisan Policy Center Disaster Response Reform Task Force

North Bay Fires (2017), Kincaid + Walbridge Fires (2019) + Glass Fire (2020) – Home Fires (Sonoma County, CA) Camp Fire (2018), Woolsey Fire (2018), Alameda Fire (2020), Santiam Fire (2020), MacKenzie Fire (2020), Cache Fire (2020), CZU Lightning Complex Fire (2020), Marshall Fire (2021), Maui Fire (2023)

Subject Matter Expertise: Community Recovery, Long-Term, Federal Advocacy, Wildfire Leadership Network, Frontline Community Support, Local + Federal Government; Public Policy

Named as one of Forbes "50 over 50" IMPACT Leaders in 2022, Jennifer Gray Thompson has helmed Rebuild North Bay Foundation since January 2018, right after the North Bay megafire of October 2017. Gray Thompson took a fledging organization and became a powerhouse national nonprofit recognized national leader in recovery from megafires. She serves on the Bipartisan Policy Center Disaster Response Reform Task Force, making recommendations to Congress on reforms in 2024/25.

Jennifer is a lifelong resident of Sonoma Valley in Northern California. After teaching high school for ten years, Jennifer earned a master's in Public Administration from the University of Southern California's Price School of Public Policy. Post-graduate school, Jennifer worked for the Sonoma County Board of Supervisors. After the devastating fires in the North Bay of San Francisco in October 2017, she accepted a position as Executive Director of the newly formed 501c3 nonprofit Rebuild NorthBay Foundation (RNBF), an organization dedicated to helping the region rebuild better, greener, safer, and faster.

Since "paying it forward" in the Camp Fire and Woolsey Fires of 2018, Jennifer has led delegations to 18 counties, again paying lessons forward to virtually every wildfire-affected American West community. In response to the growing crisis, RNBF created After the Fire USA to help solve the issue of megafires, a climate-based disaster affecting millions of people globally. This initiative was born of practice in communities for several years and the increasing threat of the Era of Megafire.

As CEO of this organization, Jennifer designed an effective and innovative Wildfire Leadership Network, implemented a Survivor Deployment Model for newly fire-affected communities, provided immersive and actionable After Action Reports to national organizations and communities, advocated with wildfire survivor leaders for sane and intelligent federal policies, and hosts a national summit on Wildfire Leadership annually in Sonoma, drawing upon leaders from frontline communities as well as the public, nonprofit, and private sectors.

Jennifer is committed to equitable and resilient recoveries for every community, regardless of their ability to pay. *ATF USA (501c3) does not charge communities for their services.* After the Fire USA is committed to supporting locally led and designed recoveries.

ATF USA has fostered a thriving resiliency program in partnership with CalFire and USDA/RCPD under the Parent Organization, Rebuild North Bay Foundation, which is the lead agency for nearly \$10M in state and federal grants for wildlands fuel mitigation programs. These innovative programs are now being transferred to wildland management organizations, having proved the model and innovated to address a severe gap in service delivery.

Jennifer is nationally recognized as a leader in the space of wildfire and has presented at several national conferences, testified in front of the Senate, and is a recognized Subject Matter Expert on megafires nationally. She is the creator and host of the “How to Disaster” podcast, which highlights proven and effective leaders with great ideas in the space of disaster.

Jim Alvey, Vice President Disaster Recovery, Good360

Subject Matter Expertise: Corporate + Philanthropic Connections; Relationships + Logistics Post-Disaster

As Good360 Vice President, Disaster Recovery, Jim’s goal is to work across public, private, and non-profit sectors to increase the efficiency and impact of in-kind donations in the disaster space. Since 2016, he has cultivated corporate and foundation relationships that expand the Good360 donor network, increase nonprofit collaboration, and connect government and association entities. Jim’s primary focus areas are products and funding partnerships that support the pre-positioning of products and long-term recovery efforts while providing thought leadership to all stakeholders.

At Good360, Jim partners with Corporate Social Responsibility, Community Engagement, and Sustainability departments, along with Reverse Logistics and Supply Chain teams. He also works with foundations to amplify the impact of the missions they support, leveraging over 40 years of experience in Communications, Media, Partnerships, and Operations.

Good360 makes it easy to donate products, do some good, and see valuable ROI. Their 100,000+ non-profit network member organizations benefit from the goods donated by corporate and foundation partners.

Jim lives in Columbia, Maryland, with his wife, dog, and two cats. They have two adult children, Michelle and James. Outside of nonprofit work, Jim enjoys tennis, hiking, writing, and travel.

Reva Feldman, Emergency Management Consultant/City Manager, Malibu (ret)

Tubbs Fire (2017), Woolsey Fire (2018), Oregon Fires (2020)

Subject Matter Expertise: Public sector leadership before, during and after disaster; City + County Management; Coastal Issues

Reva Feldman is an executive level leader with over 25 years of public sector experience working in city management and disaster preparedness, response and recovery to help ensure that local and state municipalities are prepared for emergencies and are able to respond quickly and efficiently before and after a disaster.

Ms. Feldman first served as the chief operating officer for a state park agency and then served as city manager for the City of Malibu, CA. Her strong leadership skills, knowledge, experience, and profound dedication to local government spurred her many notable achievements, including leading Malibu through the 2018 Woolsey Fire. Ms. Feldman retired from public service in 2021 and opened a consulting firm that supports local government and the city management profession. She serves as a Senior Fellow at Portland State University entities and is a frequent speaker for public and private organizations.

Stan Gimont, Co-Chair, Disaster Response Reform Task Force, Bipartisan Policy Center, Former Asst Secretary for Grant Programs HUD: CDBG-DR Funds

Subject Matter Expertise: Housing + HUD + Long-Term Recovery Navigating Federal Programs; Legislation; Public Policy

Stan Gimont is Senior Advisor for Community Recovery. Stan entered private practice in 2019 after 32 years of service with the US Department of Housing and Urban Development (HUD).

Stan is an experienced and trusted strategic advisor, providing support focused on HUD Programs, housing issues, and long-term community recovery. He is also a member of the Bipartisan Policy Center's (BPC) Disaster Recovery Reform Task Force and provides BPC with support as a subject matter expert.

From August 2016 through July 2019, Stan served as HUD's Deputy Assistant Secretary for Grant Programs. In this role he provided management direction and oversight for all aspects of the Community Development Block Grant (CDBG) Program, including long-term disaster recovery (CDBG-DR). As Director of HUD's Office of Block Grant Assistance from 2008-2016, Stan managed approximately \$60 billion in federal funding to assist the nation's communities in addressing housing, development, and disaster recovery needs.

Tatiana Hernandez, CEO, Community Foundation Boulder County

Marshall Fire (2021)

Subject Matter Expertise: Regional Philanthropy; Fund Disbursement; Post-Disaster Community-Based Leadership

Tatiana Hernandez joined the Community Foundation Boulder County as CEO in July 2020. During her tenure, the foundation has led numerous disaster-related philanthropic efforts including responses to COVID, a mass shooting and multiple fires. The foundation is currently responsible for the most significant philanthropic response to a natural disaster in Colorado's history.

Prior to joining the foundation, Tatiana served as President of the Emily Griffith Foundation and was a Senior Program Officer at the Kresge Foundation. In Boulder, Tatiana served as Arts Director for the Hemera Foundation where – in partnership with the Bonfils-Stanton Foundation and Colorado Creative Industries – she developed Arts in Society, Colorado's largest private-public funding program for the arts.

Tatiana began her philanthropic career at the Knight Foundation, where she led the Knight Arts Challenge, supporting artists and arts organizations in eight cities. She oversaw a portfolio of more than \$100M in investments and distributed \$10M annually.

Prior to philanthropy, Tatiana worked in the nonprofit sector on issues ranging from college access to climate change. Originally from Miami and a native Spanish speaker, she has served on numerous boards and committees. She currently serves on the board of Philanthropy Colorado.




Tatiana has received several awards throughout her career including being named a "40 Under 40" honoree by the Denver Business Journal, a "Rising Star" by the Boulder Chamber of Commerce, and a "50 Most Influential Business Leader" by BizWest.

The daughter of Cuban and Colombian immigrants, she was a first-generation graduate of The George Washington University, and is committed to cultivating a more equitable and inclusive United States, one community at a time.

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Jenn Kaaoush, Director, Superior Rising Trustee, Town of Superior, Veteran (Army)

Marshall Fire Survivor 2021 - Smoke Damage

Subject Matter Expertise: Post-Disaster Community Leadership, Local Government (elected)

As Director of Superior Rising, a non-profit formed to support residents in their recovery from the Marshall Fire, Kaaoush has been advocating directly for them since the fire. This includes: streamlining government processes, sourcing funds and resources, pushing upwards to state and federal authorities to put people first, opening more funding, and removing obstacles that slow the community's recovery and future planning efforts.

Kaaoush understands the high likelihood of another horrible event affecting Colorado in the future, and is using her knowledge, relationships, and experience to ensure other communities will not have to relearn all the lessons the Marshall Fire victims have garnered in the aftermath of this disaster.

Kaaoush currently serves on the Town of Superior Board of Trustees. She has also served on the Town's Planning Commission, the Town's Parks and Recreation Committee, and on the Board of the Democratic Women of Boulder County. Jenn has cultivated collaborative relationships with local, regional, state, and national community members through her work as a Planning Commissioner and Superior Rising leadership. Kaaoush is a fourth-generation Army Veteran and a Former Diplomat, having served in embassies in the Middle East region.

Christa Lopez, PhD, Long-Term Recovery and Resiliency Professional, Fmr Director of Disaster Recovery, State of Texas

Subject Matter Expertise: CDBG-DR Implementation; Short + Mid + Long-Term Recovery; Navigating Federal Agencies (FEMA, HUD, SBA); Trauma Informed Service

Christa López, Ph.D., is a long-term recovery and resiliency expert with thirty years of experience in disaster, trauma-informed leadership and implementation of federal policy at the state level.

Dr. Lopez spent over 25 years in the government and higher education sectors and has served in roles to support elected officials overseeing disaster recovery for the State of Texas. While working for Texas General Land Office, she was the director of the direct housing mission funded by FEMA but administered by the State, a first-of-its-kind program, during Hurricane Harvey recovery. She is well known for her experience in both FEMA-funded and HUD-funded programs.

Christa shares that 'being of service to others' has been her life motto and guiding mantra. Over the past several decades of professional work, Christa has focused on how her work can improve the lives of others. Beyond professional work, Christa demonstrated her service motto through decades of volunteer work as a park naturalist, in search & rescue, as a volunteer firefighter/EMT-B, and in disaster response.

Owen Minott, Associate Director, Housing & Infrastructure. Bipartisan Policy Center

Subject Matter Expertise: Public Policy, Legislation, Infrastructure, Housing

Owen Minott is an Associate Director at the Bipartisan Policy Center where he helps to lead efforts on federal policy issues related to housing, infrastructure, and disaster recovery. Prior to joining BPC, he was a management analyst at the Washington Metropolitan Area Transit Authority (WMATA) in the office of Strategy, Planning, and Program Management. Owen is a Fulbright scholar and has a B.A. from Bates College and a Master's in Public Affairs from Princeton University.

Reina Arai Pomeroy, Survivor- Total Loss

Marshall Fire (2021)

Subject Matter Expertise: Digital Communities + Leadership; Post-Disaster Community Advocacy (State and Local)

Reina Pomeroy is a Marshall Fire total loss survivor, in the process of rebuilding her home. She co-founded Marshall Together, a grassroots non-profit organization built by fire survivors with the mission to get as many people home as possible.

Early in the Marshall Fire recovery, Reina leveraged her professional background in virtual community building and built a Slack and email list of verified fire survivors. This resource has become the source of truth for many who are in the process of recovering. Through organizing and partnerships, the Marshall Together organization has been able to advocate for tangible changes that have put millions of dollars back into the pockets of survivors and gotten more families home at an unprecedented speed of recovery.

Chris Smith, Senior Advisor, Individual Assistance and Disaster Housing, Frmr Dir. FEMA Individual Assistance Division

Subject Matter Expertise: Senior Leader Advisor - Local, State, Federal Government Emergency Management – Disaster Recovery, Voluntary Organizations Active in Disaster – Public Policy

As a career local, state and federal emergency management official, a foundational element of Chris's working philosophy is to build community resilience, especially in the wake of disaster. A convener and collaborator, Chris focuses on engagement – involving stakeholders at each level of government and community members to build and execute programs and capabilities that mitigate against the impacts of disaster and facilitate robust recovery efforts. Chris is a staunch advocate for disaster service work, he served on the National Voluntary Organizations Active in Disaster (NVOAD) Board of Directors (2015-2022).

Prior to his current work in the private sector, Chris led FEMA's Individual Assistance Division (2015 – 2022). He administered federal recovery operations in over 175 presidential disaster declarations, delivering approximately \$51B in federal funding to disaster survivors to support their individual recovery efforts. Before Mr. Smith went to Washington, D.C., he served as Nevada's Chief of Emergency Management, Homeland Security Advisor to the Governor (2011-2015) and a local emergency manager in Reno, Nevada (2005-2011). Chris is a former member of FEMA's National Advisory Council (2013-2015) where he and other members worked to improve FEMA's disaster recovery policies. He began his professional career as an educator, serving as a middle school teacher and principal prior to his transition into public safety. Chris holds degrees (B.A., M.Ed.) from the University of Nevada and makes his home in Reno, Nevada.

Casey Taylor, Fire Survivor – Total Loss; Community Leader; Rebuild Paradise Foundation Board; Superintendent, Achieve Charter Schools of Paradise

Camp Fire (2018)

Subject Matter Expertise: Community Leadership Pre and Post Disaster + Education

Casey is the founder and Superintendent of Achieve Charter Schools of Paradise. After the 2018 Paradise Camp Fire, Casey led her team in reopening schools temporarily in church facilities in the neighboring city of Chico. During that time,

she also started building a permanent school facility in Chico “just in case” they could never return to Paradise. In the 2021-22 school year, Casey opened Achieve Charter School of Chico at the new facility and reopened Achieve Charter School of Paradise at the original campus in Paradise. She and her team are working to reopen Achieve Charter High School in Paradise in the coming years.

Casey is a Paradise native committed to providing high-quality educational options to the community, especially during rebuilding. Casey returned home to Paradise in 2021 and has the first wildfire-prepared home in the nation. She sits on multiple Boards, including the Rebuild Paradise Foundation, Valley Contractors Workforce Foundation, the Paradise Rotary Club, and the California Charter Schools Association. She currently supports other school leaders across the state in rebuilding schools after disasters. She is frequently asked to share Achieve’s story to inspire others and advocate for state and federal support.

Tennis Wick, Director, Permit Sonoma

North Bay Fires (2017), Kincaid + Walbridge Fires (2019), Glass Fire (2020)

Subject Matter Expertise: Rebuilding Post-Disaster; County Leadership; Mutual Aid, Debris Removal; Permit Processes

Tennis Wick has served as Permit Sonoma (Permit and Resource Management Department) Director since November 2013. The agency balances environmental protection and sustainable development of Sonoma County’s natural resources through the agency’s planning, engineering, building, fire prevention, natural resources, code enforcement and administration divisions.

Before joining the County of Sonoma, Wick worked as a principal at Berg Holdings responsible for government affairs, site acquisition, design and entitlement. Previously, Tennis practiced as a partner at the engineering and planning consulting firm CSW/Stuber-Stroeh Engineering Group, Inc. He began his career with the County of Marin where he led current planning as Development Chief.

Wick is a member of the American Institute of Certified Planners (10447) and the American Planning Association. Tennis Wick holds a Juris Doctor degree from Golden Gate University School of Law and a Bachelor of Arts degree in Political Science with a Public Service Emphasis from the University of California, Santa Barbara.

A long-time Petaluma resident, Tennis Wick has been civically active twice serving as a City Planning Commissioner and as Board President of the Friends of the Petaluma River, Petaluma Peoples Service Center and the Petaluma Area Chamber of Commerce. Wick currently serves as past president of the California County Planning Directors Association.

Tennis is part owner of Hen House Brewing Co. He and his wife Holly have four grown daughters and three granddaughters and are active in endurance sports, cooking and gardening.

Daily Itinerary: Dec. 3-8, 2023

We value complete transparency, especially for the megafire communities we serve. We understand the difficulty in navigating the people, organizations, businesses, media, and more that arrive during and after the fire. We understand the need for sound advice and an empathetic response at the most vulnerable moment of most people’s lives.

A megafire renders the unimaginable entirely real – and the reality of the aftermath is devastatingly sad.

We know.

Only a fire survivor can relate to the smell and sight of the ruins from a megafire. The orange and grey car shells, the charred chimneys punctuating the landscape, the lingering scent of ash and smoke, the weight of the grief of locals, and the incredible will to help each other get through this terrible event are all familiar to us.

Still, every megafire is different because every megafire community has elements before the fire that also determine what happens after the fire. We are called “After THE Fire” and not “After the Fires” because each megafire is a personal and communal loss that must be respected. Further, we are committed to serving the community in front of us every time with respect and reverence for what has happened.

We publish our agendas and participants to engender trust.

Day One - December 4, 2023

- Tour of Lahaina Burn Area
 - Attendees: Josiah Nishita, Maui County Deputy Managing Director, Keanu Lau Hee, Maui County Planner, Jennifer Gray Thompson, Casey Taylor, Jenn Kaaoush, Jim Alvey, Owen Minott, Reina Arai Pomeroy, Tatiana Hernandez, Tennis Wick and Natalie Minuzzo
- Visit to Disaster Recovery Center
 - Attendees: Jennifer Gray Thompson, Casey Taylor, Jenn Kaaoush, Jim Alvey, Owen Minott, Reina Arai Pomeroy, Tatiana Hernandez, Tennis Wick and Natalie Minuzzo
- Meeting with Maui County Officials
 - Attendees: Mayor Bissen County of Maui + all county staff including Leo Caires, Chief of Staff, Josiah Nishita, Deputy Managing Director, Regina Corniel, Secretary, Maui County Planning Director, Maui County Housing and Human Services Director, Bradford Ventura, Maui County Fire Chief, Scott Teruya, Maui County Finance Director, Jennifer Gray Thompson, Casey Taylor, Jenn Kaaoush, Jim Alvey, Owen Minott, Reina Arai Pomeroy, Tatiana Hernandez, Tennis Wick and Natalie Minuzzo
- Meeting with Offices of US Senator Mazie Hirono, US Senator Brian Schatz, and US Representative Jill Tokuda
 - Attendees: Deidre Tegarden, Maui County Field Representative (Tokuda), Mike Dahilig, Senior Policy Counsel (Schatz), Dale Hahn (Schatz), Carlos Santana, Community Liaison (Hirono),

Saedene Ota, Maui Field Rep (Hirono), Jennifer Gray Thompson, Casey Taylor, Jenn Kaaoush, Reva Feldman, Chris Smith, Christa Lopez, Stan Gimont, Jim Alvey, Owen Minott, Reina Arai Pomeroy, Tatiana Hernandez, Tennis Wick and Natalie Minuzzo

- Attend Maui Mayor's Advisory Committee Meeting
 - Attendees, Mayor Richard Bissen, Kim Ball, Kaliko Storer, Laurie DeGama, Rick Nava, and Archie Kalepa, Cynthia Lallo, Jennifer Gray Thompson, Casey Taylor, Jenn Kaaoush, Jim Alvey, Owen Minott, Reina Arai Pomeroy, Tatiana Hernandez, Tennis Wick and Natalie Minuzzo

Day Two - December 5, 2023

- Meeting with FEMA Region 9 Representatives
 - Attendees: Bob Fenton, FEMA Region 9 Regional Administrator, Curtis Brown, FEMA, Jennifer Gray Thompson, Casey Taylor, Jenn Kaaoush, Reva Feldman, Chris Smith, Christa Lopez, Stan Gimont, Jim Alvey, Owen Minott, Reina Arai Pomeroy, Tatiana Hernandez, Tennis Wick and Natalie Minuzzo
- Meeting with Maui Rapid Response
 - Attendees: Nicole Huguenin, Maui Rapid Response, Jennifer Gray Thompson, Casey Taylor, Jenn Kaaoush, Reva Feldman, Chris Smith, Christa Lopez, Stan Gimont, Jim Alvey, Owen Minott, Reina Arai Pomeroy, Tatiana Hernandez, Tennis Wick and Natalie Minuzzo
- Meeting with Lahaina Strong
 - Attendees: Alfy Basurto, Operational Director at Rebuild Maui Org, Nicole Huguenin, Jennifer Gray Thompson, Casey Taylor, Jenn Kaaoush, Reva Feldman, Chris Smith, Christa Lopez, Stan Gimont, Jim Alvey, Owen Minott, Reina Arai Pomeroy, Tatiana Hernandez, Tennis Wick and Natalie Minuzzo
- Meeting with Roots Reborn, Maui Medics and Maui Rapid Response
 - Attendees: Veronica Mendoza Jachowski, Co-Founder and Executive Director, Roots Reborn, Khara Jabola-Carolus, Co-Founder, Roots Reborn, Noelani Ahia, Executive Director, Maui Medics, Nicole Hugenin, Maui Rapid Response, Jennifer Gray Thompson, Casey Taylor, Jenn Kaaoush, Reva Feldman, Chris Smith, Christa Lopez, Stan Gimont, Jim Alvey, Owen Minott, Reina Arai Pomeroy, Tatiana Hernandez, Tennis Wick and Natalie Minuzzo

Day Three - December 6, 2023

- Meeting with Global Empowerment Mission (GEM)

- Attendees: Kainoa Horcajo, GEM, Greg Sheperd, GEM, Danielle Kawehi Dreis, GEM Executive Director, Jennifer Gray Thompson, Casey Taylor, Jenn Kaaoush, Reva Feldman, Chris Smith, Christa Lopez, Stan Gimont, Jim Alvey, Owen Minott, Reina Arai Pomeroy, Tatiana Hernandez, Tennis Wick and Natalie Minuzzo
- Visit to Kāko'o Maui
 - Attendees: Kainoa Horcajo, GEM, Greg Sheperd, GEM, Jennifer Gray Thompson, Casey Taylor, Jenn Kaaoush, Reva Feldman, Chris Smith, Christa Lopez, Stan Gimont, Jim Alvey, Owen Minott, Reina Arai Pomeroy, Tatiana Hernandez, Tennis Wick and Natalie Minuzzo
- Visit to Disaster Recovery Center
 - Attendees: Kainoa Horcajo, GEM, Greg Sheperd, GEM, Rebekah Uccellini, Aunty Gurdy, Jennifer Gray Thompson, Casey Taylor, Jenn Kaaoush, Reva Feldman, Chris Smith, Christa Lopez, Stan Gimont, Jim Alvey, Owen Minott, Reina Arai Pomeroy, Tatiana Hernandez, Tennis Wick and Natalie Minuzzo
- Meeting with Fishing for Housing at Ka'anapali Beach
 - Attendees: Kainoa Horcajo, GEM, Greg Sheperd, GEM, Pa'ele Kiakona, Jordan Ruidas, Jennifer Gray Thompson, Casey Taylor, Jenn Kaaoush, Reva Feldman, Chris Smith, Christa Lopez, Stan Gimont, Jim Alvey, Owen Minott, Reina Arai Pomeroy, Tatiana Hernandez, Tennis Wick and Natalie Minuzzo
- Meeting at Westside Distribution Center
 - Attendees: Kainoa Horcajo, GEM, Greg Sheperd, GEM, Kimokeo Kapahulehua, President, Kimokeo Foundation, Gretchen Losano, Erik Beale, Maui Eco Built, Jennifer Gray Thompson, Casey Taylor, Jenn Kaaoush, Reva Feldman, Chris Smith, Christa Lopez, Stan Gimont, Jim Alvey, Owen Minott, Reina Arai Pomeroy, Tatiana Hernandez, Tennis Wick and Natalie Minuzzo
- Attend Zoom meeting with Hawaii Community Foundation
 - Attendees: Mary Leong Saunders, Hawaii Community Foundation, Todd Apo, Hawaii Community Foundation, Jennifer Gray Thompson, Tatiana Hernandez, Reina Arai Pomeroy and Jenn Kaaoush.

Day Four - December 7, 2023

- Meeting with Native Hawaiian Philanthropy

- Attendees: Pualani Enos, Kaulia Creates, LLC, Aina Momona, Jennifer Gray Thompson, Casey Taylor, Jenn Kaaoush, Reva Feldman, Chris Smith, Christa Lopez, Stan Gimont, Jim Alvey, Owen Minott, Reina Arai Pomeroy, Tatiana Hernandez, Tennis Wick and Natalie Minuzzo
- Tour of Ohana Hope Village
 - Attendees: Dr. Ashley Kelly, COO, Family Life Center, Jennifer Gray Thompson, Casey Taylor, Jenn Kaaoush, Reva Feldman, Chris Smith, Christa Lopez, Stan Gimont, Jim Alvey, Owen Minott, Reina Arai Pomeroy, Tatiana Hernandez, Tennis Wick and Natalie Minuzzo
- Meeting with Offices of State Senator Troy Hashimoto and Maui Councilmember Yuki Lei Sugimura
 - Attendees: Senator Troy Hashimoto, Councilmember Yuki Lei Sugimura, Tasha Kama, Presiding Officer Pro Tempore of the Maui County Council and the Chair of the Housing and Land Use Committee, Jennifer Gray Thompson, Casey Taylor, Jenn Kaaoush, Jim Alvey, Owen Minott, Reina Arai Pomeroy, Tatiana Hernandez, Tennis Wick and Natalie Minuzzo

The Maui Fires: August 8-11, 2023

The Maui Fire was a series of wildfires that burned parts of the island of Maui in the U.S. state of Hawaii in August 2023⁴. This disaster is the worst in Hawaii's history, surpassing the tsunami of 1960; it is the deadliest wildfire in 100 years and surpassed the Camp Fire in Paradise, California in 2018.

The fires, which began on Tuesday, August 8, struck hardest the historic resort town of Lahaina, on Maui's western peninsula, reducing most of the town to ash and ruins¹⁵. The upcountry community of Kula was also affected and lost approximately 19 homes.

Strong winds from Hurricane Dora fanned the fires, a Category 4 storm which passed south of Hawaii on August 8th and prevented aircraft from flying over the town during the fire⁵. The fires were not average wildfires, able to be controlled once the winds took over and houses became the fuel. Then these fires became megafires, defined as being over 100K acres OR having an outsized impact on the community and built environment.



Source: Getty Images, Reuters

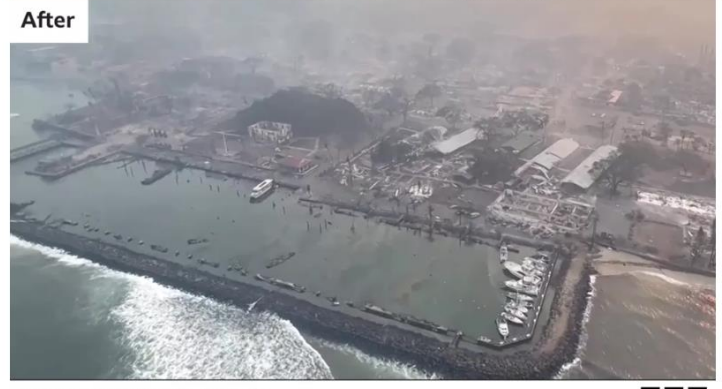
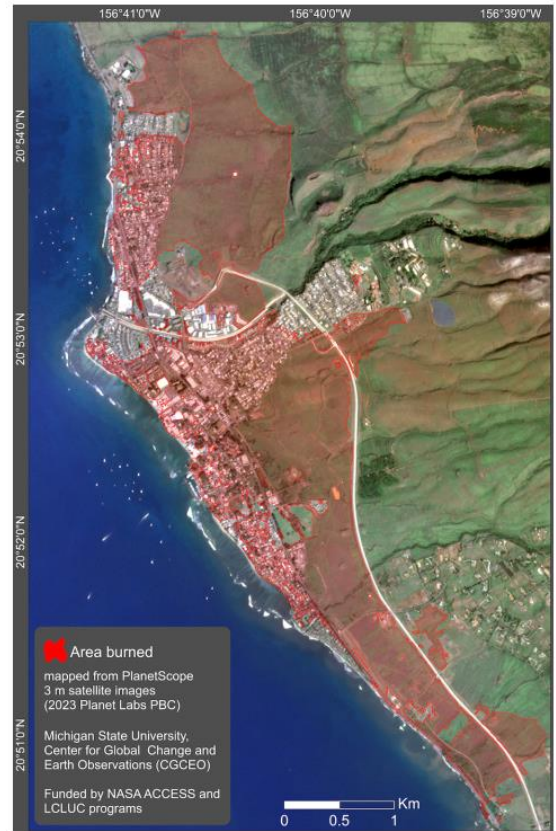


Image credits: Google, Reuters



The fires were reported to be under control by August 14th, but efforts to fully extinguish them continued on some parts of the island⁵.

- The death toll from the Lahaina wildfire currently stands at 100 people. There are still three people listed as missing, with the latest victim identified on January 27, 2024.
- The fire destroyed 2,207 homes and 800 businesses, including many historical structures. Several hundred more structures suffered smoke damage.
- Approximately 2,200 acres were burned.
- The loss of businesses has impacted an estimated 7,000 employees, though the number could be much higher as fallout from the fire continues to incur economic losses.
- Daily total business revenue loss is estimated to be \$2.7 million daily.
- 50 percent of the Lahaina homes were renter-occupied and the loss of rental income is approximately \$2 million a month. Of note, Maui has a high number of multi-generational homes, and the number of renters from the same family is significant but unknown.



Map produced by the ACCESS/LCLUC project team using AI applied to a PlanetScope satellite image to show burned areas in and around Lahaina, Maui, Hawaii. Credit: MSU CGCEO.

Unfortunately, the path and behavior of this megafire was as expected: hot, fast, destructive, and deadly. We've witnessed this fire behavior many times before, but sadly, this was the deadliest megafire in over 100 years.

An orchestrated foreign entity disinformation campaign contributed to a worsening of trauma during the event. This campaign was intended to sow more significant division and suspicion in Hawaii and the larger United States and was carried over social media platforms. Unfortunately, many people chose to promote the fake information and often weighed in on local pages meant to help the people of Maui find resources, information, and public safety updates. We mention this element because we've witnessed attempts prior to mischaracterize megafires as intentional events, using the nature of these megafires to disinform those most traumatized by the event.

Megafires are not orderly, predictable, controllable wildfire events. Instead, they are excessively hot, terrifyingly fast, and overwhelmingly destructive. They skip a home, destroy square miles, and then burn only one house in a

subdivision. They will blowtorch up a mountain and make their own weather, sending embers miles ahead to start new fires. They are not orchestrated events, and any whisper of this idea is patently incorrect.

While the fire on Maui did not last for several weeks, it did displace over 6500 people, forcing most into the Red Cross congregate sheltering program, primarily in hotels in Lahaina that survived the megafire. This program is designed to serve those eligible for FEMA assistance and those ineligible, who were then served by the Red Cross.

Notably, both formal and informal social services organizations provided the vast amount of relief underpinning the efforts in Maui to this day, nearly 6 months after the fire. Maui has a particularly strong native and island culture that prioritizes taking care of the people and the land. Where other disaster pop up these services and depend on ad-hoc, often temporal community support, the people of Hawaii have norms, language, arts and culture to support the extraordinary efforts of community based services after disaster.

While the Maui megafire was a deeply traumatic experience, we applaud the exceptional community response. Maui is well positioned to recover, rebuild, and reimagine Lahaina (and Kula, where appropriate) because of the strength of the people and culture.



About Maui

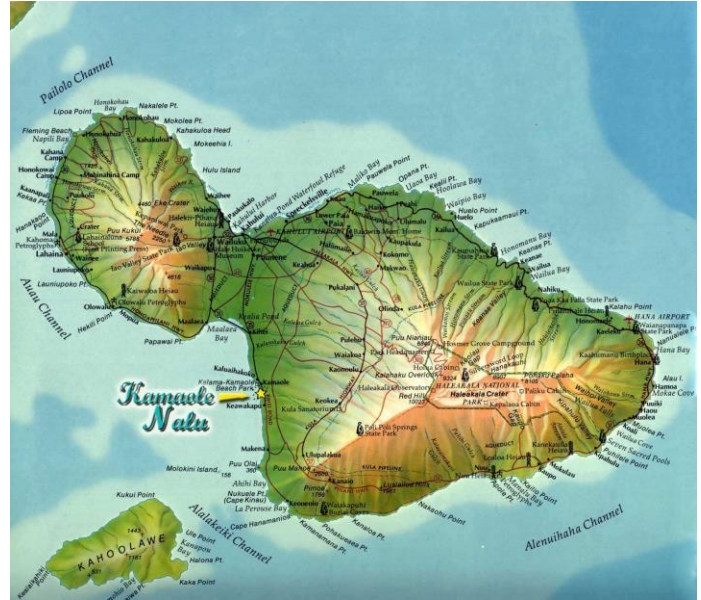
Maui is the second-largest island in the Hawaiian archipelago and has a rich and diverse history of human settlement, culture, and ecology.

The island was also the site of several battles and conflicts, such as the Battle of Kepaniwai in 1790, where King Kamehameha I defeated the Maui army and consolidated his control over the Hawaiian Islands. The island became part of the Kingdom of Hawaii, which was later overthrown by a group of American businessmen and annexed by the United States in 1898. The island experienced a boom in sugar and pineapple plantations, which diverted water from streams and wetlands to irrigate the crops and displaced many native Hawaiians from their lands.

The island also became a strategic military base during World War II, and a popular tourist destination after the war, which brought more development, population growth, and environmental challenges. Lahaina, a town on the west coast of Maui, was once the capital of the Kingdom of Hawaii and a historic whaling port.

Importantly, Maui is also the site of a long-standing struggle for water rights, land rights, and sovereignty by the native population (Hawaiians are native by definition), who have been marginalized and oppressed by colonialism and capitalism.

Maui is renowned as a place of beauty, diversity, and resilience, where the native Hawaiians and other residents are working to preserve their culture, restore their environment, and reclaim their future.



Demographics

- Maui is the second-largest island in the Hawaiian archipelago, with a population of about 164,000 people as of 2020. Lahaina is a town on the west coast of Maui, with a population of approximately 12,700 people as of 2020.
- The ethnic composition of Maui and Lahaina is very diverse, reflecting the history of immigration and colonization of the island. According to the 2020 census, the racial and ethnic breakdown of Maui County and Lahaina CDP (census-designated place) are as follows:

Race/Ethnicity	Maui County	Lahaina CDP
White alone	34.6%	27.9%
Black or African American alone	0.9%	0.1%
American Indian and Alaska Native alone	0.6%	0.1%
Asian alone	28.6%	34.8%
Native Hawaiian and Other Pacific Islander alone	10.4%	10.5%
Two or More Races	24.9%	24.7%
Hispanic or Latino	12.0%	11.5%
White alone, not Hispanic or Latino	29.8%	23.1%

The Trust Gap

The Trust Gap between the native of Maui, Hawaii and the government is a long-standing issue that stems from the history of colonialism and the United States' annexation of the Hawaiian islands in the late 19th century [^10^]. Many Native Hawaiians feel that the government does not represent their interests or respect their culture and that they have been marginalized and exploited by the tourism and military industries. The trust gap was exacerbated by the Maui Fire of 2023, a series of wildfires that burned parts of the island in August 2023, killing over 100 people and destroying the historic town of Lahaina⁸. The fire was fueled by strong winds and low humidity from Hurricane Dora, a category 4 storm approaching the islands⁹. Many residents and visitors had to evacuate or jump into the ocean to escape the flames⁵. The fire also damaged cultural landmarks, such as the Lahaina Banyan Tree, which was imported to the island in 1873⁹.

The government's response to the fire was criticized by many as slow, inadequate, and insensitive. The Maui fire chief and the top emergency management official were not on the island during the fire, and the state officials did not declare a state of emergency until two days after the fire started¹. The federal government offered to recognize a Native Hawaiian government to settle the historical grievances and protect the rights and benefits of Native Hawaiians². However, this proposal was rejected by most Native Hawaiians, who saw it as a symbolic gesture that would not address the root causes of the problem or restore their sovereignty². They also feared that federal recognition would limit their options for self-determination and make them dependent on the U.S. government.

The federal government offered to recognize a Native Hawaiian government to settle the historical grievances and protect the rights and benefits of Native Hawaiians².

On the other hand, some leaders on both sides have tried to bridge the trust gap and work together to rebuild the community and prevent future disasters. The Maui County Mayor, Richard Bissen, expressed his sympathy and solidarity with the victims and praised the efforts of the local firefighters, volunteers, and businesses who helped with the rescue and recovery¹. The President, Joe Biden, ordered all available federal assets to support the response to the fire and sent his condolences and gratitude to the people of Maui⁹. He appointed a special envoy, Uahikea Maile, a Native Hawaiian professor and activist, to facilitate dialogue and cooperation between the federal and state governments and the Native Hawaiian community³. Maile advocated for a more inclusive and participatory approach to governance, and urged the government to respect the cultural and environmental values of the Native Hawaiians³. He also proposed a comprehensive plan to address the social, economic, and ecological challenges facing Maui, such as housing shortage, poverty, health disparities, and climate change³.

The trust gap between the native of Maui, Hawaii and the government is a complex and multifaceted issue that requires both/and leadership, which means embracing paradoxes and seeking creative solutions that balance opposing forces^[^10^]. The fire of 2023 was a tragic event that exposed the deep divisions and tensions between the two sides. Still, it also created an opportunity for dialogue and collaboration to heal the wounds and build a better future for Maui and Hawaii.

Emergency Response

The county emergency management system was criticized for failing to prepare for and respond to the fire threat despite having a risk assessment that predicted such a scenario two years earlier. The Maui Emergency Management Agency (MEMA) was led by an inexperienced administrator, Herman Andaya, who left the island

before the fire. The Maui Fire Department's chief, Bradford Ventura, was also off-island during the fire. The communication between the state and county agencies was faulty, as the state emergency management director did not know about the fatalities until the next day. The county officials could not provide a clear timeline of when and how the evacuation order was issued or executed.

The island is equipped with audible all-hazard outdoor warning sirens intended to notify the public during emergencies. The system is tested every month and is generally associated with warnings for tsunamis. The sirens were not used to warn the community about the fire, and the county has stated that they chose not to activate the audible system due to the concern that people would think there was a tsunami and head up the country toward the path of the fire.

The state government declared a state of emergency and authorized relief funds for the disaster. The governor also ordered an investigation into the county's emergency management system and its actions during the fire. The investigation is expected to reveal the causes and consequences of the fire and the recommendations for improving emergency preparedness and response in the future.

While we've been asked to provide an opinion on the response efforts, primarily from national news outlets, After the Fire USA hesitates to weigh in meaningfully on emergency response for the following reason: We've yet to see an adequate emergency response to a first-time megafire disaster, including our own North Bay Complex Fires in 2017. It does improve in every community post-disaster. We had three (3) more megafires in Sonoma County after 2017, and the improved evacuation and notification systems were stellar. Both the county and the people were far more prepared and collaborative.

This is not to say we are excusing any response; instead, it means we don't believe our opinions will serve the community and recovery process. We have provided links below to several post-megafire disaster studies and best practice studies for review.

Recommendation for Emergency Response: Christopher Godley

We strongly recommend Maui engage with Emergency Managers from megafire communities to share lessons, challenges, best practices, and continue to convene. Emergency Managers who have experienced megafires are a small group of people with a unique perspective on what is possible and advisable for the next time. In particular, we recommend Christopher Godley, formerly with the County of Sonoma (2018-2023) and now the Director of Emergency Management at Stanford University. Mr. Godley was brought to Sonoma County after our profoundly flawed response to the 2017 megafires. He created the Department of Emergency Management and

successfully led us through another three (3) megafires in 2019 and 2020, at one point evacuating 180,000 people in 12 hours.

Emergency response reviews and recommendations from other megafires:

- **Marshall Fire (December 30, 2021):** The review report by the **Boulder County Sheriff's Office** identified several areas of improvement for emergency response, including better communication, more efficient evacuation procedures, and improved training for emergency responders².
- **Woolsey Fire (November 8, 2018):** The review report by the **Los Angeles County Fire Department** identified several areas of improvement for emergency response, including better communication, more efficient evacuation procedures, and improved training for emergency responders³.
- **Camp Fire (November 8, 2018):** The review report by the **Butte County Sheriff's Office** identified several areas of improvement for emergency response, including better communication, more efficient evacuation procedures, and improved training for emergency responders⁴.
- **North Bay Fires (October 8, 2017):** The review report by the **California Department of Forestry and Fire Protection** identified several areas of improvement for emergency response, including better communication, more efficient evacuation procedures, and improved training for emergency responders⁵.
- **CZU Lightning Complex Fire (August 2020):** The review report by the **Santa Cruz County Grand Jury** identified several areas of improvement for emergency response, including better communication, more efficient evacuation procedures, and improved training for emergency responders⁶.
- **Almeda Fire (September 8, 2020):** The review report by the **City of Talent** identified several areas of improvement for emergency response, including better communication, more efficient evacuation procedures, and improved training for emergency responders⁷.

According to a research effort by the **Evans School of Public Policy & Governance** at the **University of Washington**, megafires are defined as unusually large fires requiring a complex and aggressive firefighting response because of dramatic threats to lives, property, and infrastructure. When multiple megafires co-occur, firefighting resources may be strained beyond capacity with catastrophic results¹.




Shared Challenges of Emergency Response during Megafires:

- **Resource deficiencies:** Inadequate resources such as personnel, equipment, and supplies can hamper the effectiveness of emergency response efforts².
- **Communication breakdowns:** Communication failures between emergency responders, government agencies, and the public can lead to confusion, delays, and mismanagement of resources²³.

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After the Fire USA is an initiative of Rebuild NorthBay Foundation, EIN/TAX ID#82-3266893

Contact us at info@afterthefireusa.org and visit us online at afterthefireusa.org.

Look for After the Fire USA on  Facebook,  Instagram,  YouTube, and subscribe to our podcast, How to Disaster.

- **Inadequate training:** [Insufficient training of emergency responders can lead to poor decision-making, inadequate resource allocation, and ineffective emergency response².](#)

Recommendations for improving emergency response during megafires include:

- **Increasing resources:** [Adequate resources such as personnel, equipment, and supplies should be made available to emergency responders².](#)
- [Communication systems and protocols should be improved to ensure effective communication between emergency responders, government agencies, and the public²³.](#)
- **Providing adequate training:** [Emergency responders should receive sufficient training to ensure effective decision-making, resource allocation, and emergency response².](#)

Further Reading:

[Managing Future Risk of Increasing Simultaneous Megafires - Evans School of Public Policy & Governance \(uw.edu\)](#)

[Maui Firefighters: 60 Minutes \(November 2023\)](#)

[Marshall Fire \(December 30, 2021\): Emergency Response Review and Recommendations](#)

[Woolsey Fire \(November 8, 2018\): Emergency Response Review](#)

[Camp Fire \(November 8, 2018\): Emergency Response Review](#)

[North Bay Fires \(October 8, 2017\): Emergency Response Review](#)

[CZU Lightning Complex Fire \(August 2020\): Fatality at Last Chance; System Failure](#)

[Almeda Fire \(September 8, 2020\): City of Talent Emergency Review](#)

Housing

- Housing pressures and dynamics in Maui County before and after the fire of August 2023. Maui County has a population of about **167,000 people** and comprises four islands: Maui, Molokai, Lanai, and Kahoolawe.
- The county has one of the **worst housing crises** in the country, with high demand, low supply, and unaffordable prices for both renters and homeowners.

According to a [source](#), Maui County is experiencing a number of housing challenges including, but not limited to, the following:

- Housing and transportation costs outpacing wages.
- Overcrowding.
- Increasing homelessness.
- Illegal vacation rentals, which remove housing from the available inventory, exacerbate these problems.

Additionally, a [source](#) reports that Maui's housing shortage is in crisis. As Lahaina residents are shuffled between temporary housing options, calls are getting louder to convert short-term rentals into long-term housing. What would that take? And is it even possible? Mayor Richard Bissen says there's no shortage of homes to solve Maui's housing crisis. "It's not that we don't have enough homes, we don't have enough money to pay for those particular homes," said Bissen, speaking at last week's Council for Native Hawaiian Advancement Convention on Maui. "If money was not an object, we could buy all the second or short-term homes. The issue is, 'oh, no more 'nough homes on Maui.' No, get plenty homes on Maui, plenty empty homes on Maui, that other people own."

According to the 2020 Census, there were 77,367 housing units in Maui County, of which 62,108 were occupied and 15,259 were vacant. The vacancy rate was 19.7%, which was higher than the state average of 16.8% and the national average of 9.7%. However, most of the vacant units were for seasonal, recreational, or occasional use, and not available for long-term rental or sale.

Of the occupied housing units, **40,507 (65.2%) were owner-occupied** and **21,601 (34.8%) were renter-occupied**. The homeownership rate was lower than the state average of 67.9% and the national average of 64.8%. The median value of owner-occupied housing units was **\$671,900**, 2.5 times higher than the national median of \$266,500. The median monthly housing cost for homeowners with a mortgage was **\$2,518**, 1.5 times higher than the national median of \$1,724.

The median gross rent for renter-occupied housing units was **\$1,620**, 1.4 times higher than the national median of \$1,164. The median monthly housing cost for renters was **\$1,732**, 1.3 times higher than the national median of \$1,329. Half of the renter households spent more than 30% of their income on rent, which is considered a housing cost burden.

The fire of August 2023 was the deadliest and most destructive wildfire in U.S. history, killing at least 93 people and burning more than 2,200 structures, primarily residential, in Lahaina and Upcountry Maui. The fire displaced more than 10,000 people and left thousands of families homeless or in need of shelter. The fire also destroyed businesses, schools, churches, and historical landmarks and caused severe economic and environmental damage.



The fire exacerbated the existing housing crisis on the island, as the demand for housing increased while the supply decreased.

The fire exacerbated the existing housing crisis on the island, as the demand for housing increased while the supply decreased. Many landlords raised rents or evicted tenants to accommodate their relatives or friends who lost their homes in the fire. Some property owners also tried to sell their damaged land to investors or realtors, who offered low prices or pressured them to accept their offers. The state attorney general investigated these practices and issued a warning to prevent price gouging and unfair trade.

The federal, state, and county governments, along with FEMA and the Red Cross, provided various assistance to the fire survivors, such as hotel vouchers, rental subsidies, transitional housing units, modular homes, and tiny houses. However, these solutions were not sufficient or sustainable, as tourists already occupied many hotels and short-term rentals, and the distance and terrain of the island delayed the transportation and installation of housing units.

The fire also exposed the vulnerability and unsustainability of the water infrastructure on the island, which was damaged or contaminated by the fire and its aftermath. The fire melted plastic pipes and meters and released benzene and other chemicals into the water system, affecting the water quality and the treatment plant operations. The fire also diverted water from streams and wetlands to irrigate the crops and displaced many native Hawaiians from their lands.

The fire also renewed the tensions over the land rights and sovereignty of the native Hawaiians, who have been marginalized and oppressed by colonialism and capitalism. The native Hawaiians have a long history of conflict with the plantation owners, the developers, and the government over the sacred and scarce water and land resources. The fire destroyed some plantation camps and Lahaina, which were on the frontlines of the struggle for affordable housing and cultural preservation.

What is the "Fish In"?

According to a [news article](#), Lahaina fire survivors who have been fishing in West Maui are pressuring leaders to provide more housing options. Tents, flags, and fishing poles have lined much of Kaanapali Beach for the past few days. The West Maui organizations set up pop-up tents and fishing poles on the sandy beach, with plans to stay “for as long as it takes” until demands for long-term housing solutions for people displaced by the Lahaina fire are met.

The coalition is asking Maui County Mayor Richard Bissen and Hawai'i Gov. Josh Green to use their power and authority to provide dignified housing solutions to displaced residents by converting the West Maui short-term rental properties on the Minatoya List into long-term rentals, extending protections for renters against rental increases and evictions for at least a year, and pushing for an immediate mortgage deferral for all homes completely lost in the fire, and back end mortgage abatement of all properties that are not engaged in short term rentals. The short-term housing conversion program is primarily designed and complete for fire survivors and is now in the process of placement. Additional concerns of massive rent increases post-disaster are being raised, as well as illegal evictions. Once again, this is an integral part of the conversation -- Lahaina is a small town, Maui is a historically and spiritually significant land for Hawaiians, and basic needs like housing are increasingly complex.



While on the island, our delegation met with the Fish In / Lahaina Strong leaders and listened to their concerns.

In addition to the housing demands, they are also advocating for a more balanced economy, the return of water rights, and undoing the harms of colonialism.

The Unique Architecture of Lahaina

The future of Lahaina's architecture is uncertain, as the town faces the challenges of recovering from the devastating fire of August 2023, preserving its historical and cultural heritage, and adapting to the changing climate and economy.

[According to some sources¹²](#), the future of Lahaina's architecture should start with honoring Native Hawaiians, who have a deep connection to the land and the town's history. The design process should involve the participation and consultation of the Native community, as well as respect and support from the government and other stakeholders. The future of Lahaina's architecture should also reflect the values and voices of the local people, especially those who lost their homes and livelihoods in the fire.

The future of Lahaina's architecture should also incorporate resilient and sustainable features, such as renewable energy, water conservation, and fire prevention, to cope with the increasing risks of wildfires and other natural disasters. The future of Lahaina's architecture should balance the present and future needs, while honoring the past and the people of the town.

Lessons Learned from Puerto Rico

Through the Federal Emergency Management Agency (FEMA) and other agencies, the federal government provided various forms of housing assistance to Puerto Ricans who lost their homes or were displaced by Hurricane Maria in September 2017. [Some of these forms of assistance were¹²³⁴](#):

- Tu Hogar Renace (Your Home Reborn): A program that repaired over 68,000 homes to return them to safe, habitable, and functional conditions.
- Transitional Sheltering Assistance (TSA): A program that housed more than 7,000 families in hotels and motels in 41 states, the District of Columbia, and Puerto Rico.
- Direct Lease: A program that leased vacant units and paid the rent for disaster survivors.
- Multi-Family Lease and Repair (MLR): A program that identified and prepared existing, vacant rental properties to house survivors in multi-family residential units.
- Blue Roof Program: A program that installs temporary blue plastic sheeting over damaged roofs to prevent further damage.

However, these forms of assistance faced many challenges and limitations.

- There is a lack of available and affordable housing units in Puerto Rico, especially in rural areas.
- There was difficulty verifying the ownership and occupancy of homes, as many were unpermitted, informal, or inherited.
- The complexity and bureaucracy of the application and eligibility process, which required documentation and coordination with multiple agencies.
- The expiration and termination of some programs, such as TSA, left many survivors without a permanent housing solution.
- The insufficient and delayed funding from the federal government hindered the recovery and rebuilding efforts.

As a result, many Puerto Ricans resorted to living with relatives or friends in overcrowded or substandard conditions or in makeshift shelters, exposing them to health and safety risks. According to a survey conducted by the Census Bureau in 2018, about 13 percent of Puerto Rican households reported living with someone who moved in because of Hurricane Maria, and approximately 10 percent reported living in a damaged home. The federal government's response to the housing crisis in Puerto Rico after Hurricane Maria was criticized by many as inadequate, slow, and insensitive to the needs and rights of the people.

Puerto Rico's recovery from the hurricanes and the earthquake is still ongoing, as the island faces various challenges and opportunities to rebuild its infrastructure, economy, and society. [According to the COR3 Transparency Portal¹](#), as of November 13, 2023, the federal government has obligated over \$21 billion for public assistance projects, but only 2 percent has been spent. units.

Some of the innovations that have been implemented or proposed:

- Using shipping containers as safe and affordable homes that withstand earthquakes and hurricanes. A local architect, Carla Gautier Castro, has designed and built several container homes in Puerto Rico and plans to create more in collaboration with community organizations and nonprofits.
- Focusing on neighborhood-based reconstruction that involves the participation and consultation of the residents, especially the Native Hawaiians, who have a deep connection to the land and the island's history. The Center for a New Economy, a nonpartisan think tank, has published an analysis that suggests that this approach can better serve the needs and rights of the people and revitalize the social fabric of the communities.

- Modernizing the housing sector by incorporating resilient and sustainable features, such as renewable energy, water conservation, and fire prevention, to cope with the increasing risks of natural disasters and climate change. The RAND Corporation, a research organization, has conducted a comprehensive study that provides recommendations for policymakers and stakeholders to improve the housing conditions and quality of life in Puerto Rico.

The recovery in Puerto Rico after Hurricane Maria can inform the recovery for Maui in several ways:

- Learning from the best practices and challenges of the federal and local agencies that provided housing assistance to the survivors, especially those who lived in unpermitted or informal homes.
- Adopting innovative and affordable solutions for rebuilding homes, such as using shipping containers or neighborhood-based reconstruction.
- Improving the coordination and communication between the state and county emergency management systems and the community and private sector stakeholders.
- Incorporating resilient and sustainable features in the housing sector, such as renewable energy, water conservation, and fire prevention, to cope with the increasing risks of natural disasters and climate change.

Housing Innovations:

Flexible housing architecture is a type of architecture that allows for the continuous adaptation of a building's space layout and even its structure to evolving needs. It is a promising solution to the ever-evolving landscape of urban development, where cities face an array of challenges that demand quick and innovative solutions, ranging from the critical issue of affordable housing to the pressing need for efficient and decongested infrastructure and sustainable energy practices. Architects worldwide are redefining policies and regulations to shape their cities, and these innovative regulations can drive sustainable and consistent progress as cities stand at the intersection between their present challenges and future aspirations.

"I recall in 2018 when a Canadian builder came to Sonoma County, full of promises and plans. He managed to secure top-level meetings, but when I sat down with him, he showed me his plans -- which all had basements. We don't have basements. I knew he rushed in without asking or researching what we needed or wanted. I want our delegation to understand what Maui wants and needs. For example, perhaps it is 45% climate resilient multi-generational flex housing."

Here are other innovative examples: [Architects Propose 120 Incremental Social Houses for Iquitos, Peru](#) | [ArchDaily](#)

Housing: Immediate, Mid-Term, Long-Term

As of the writing of this After Action Report, Maui is moving out of the Hotel Program that stood up immediately after the fires and is expected to finish in the 6-7 month mark post-disaster (Feb 8-March 8, 2024).

Maui and the State of Hawaii have set housing as a top priority, and we commend the level of innovation and collaboration. In particular, we are very pleased with the Office of the Governor, Office of the Mayor, FEMA, Hawaii Community Foundation, and the Red Cross on their collaboration to convert short-term rentals into mid to long-term housing for recovery Homeowners are receiving market rate rentals via this program and fire survivors are able to stay on the island and rebuild their lives and homes. This is a highly unusual scenario. We especially appreciate the cross-sector collaboration and level of compassion + action required to stand up this program. We've seen efforts similar to this program but we cannot recall one where insurance ALE wasn't at the center of short-term rental conversions, and it was open to all FEMA-eligible survivors. Of course, having 3-4 times the housing stock needed in short-term rental stock for conversion is rare.

Notably, this has also led to several illegal evictions, though we do not have the data. This occurs in every megafire we've witnessed, along with illegal rental rate gouging.

[Maui Hale Match Program: A Best Practice based on Data and Equity](#)

One effort worth highlighting that may have contributed to this conversion program is the very impressive [Maui Hale Match Program](#), which was started by an emergent leader and founded on data. It was started early in the recovery and gained traction. We've seen versions of this effort before, but not backed by as much data.

Connecting Hawai'i homeowners to displaced Maui locals

*A community resource
for long-term housing*

Renters: Request Housing

Landlords: Offer Housing

See the Data

Landlords: Direct Lease

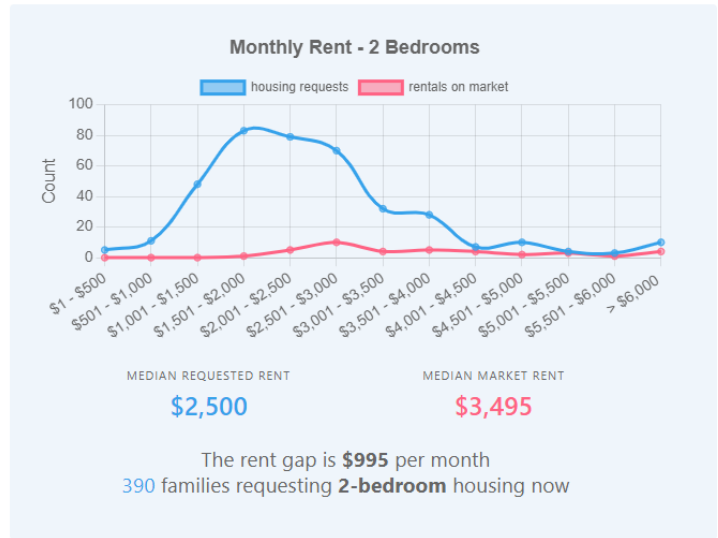
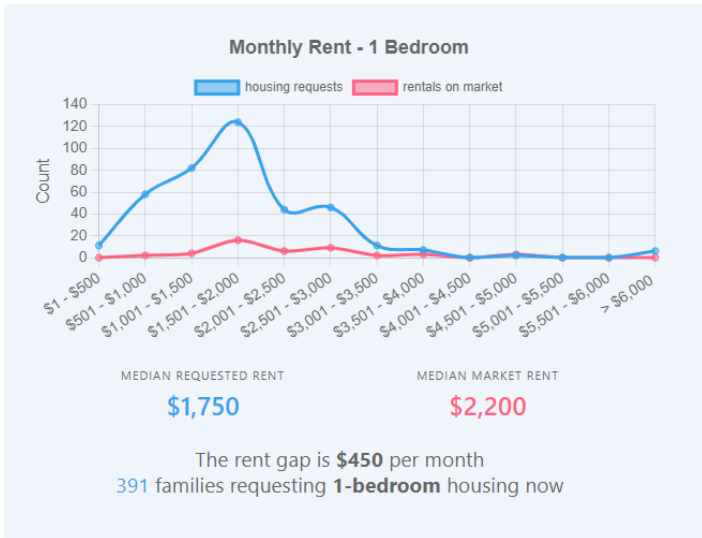
We like this program so much that we'd like to see it offered to other communities as well as supported financially for three years at minimum (5 to 6 ideally) to continue to track the data, connect landlords with renters, and help create excellent policy at the local, state and federal levels.

Further, we appreciate the simplicity of navigating the website, access to data, commitment to updating often (every 10 minutes), and the advice offered for both sides of the housing contract.

Rent Statistics

Market data collected from 136 Maui long-term rentals listed on [Craigslist](#), [Trulia](#), and [Realtor.com](#) on 10/9/23

Last updated 1/30/2024 at 12:25 PM
Updates every 10 minutes



Immediate Rehousing: The Hotel Program

Maui is highly unusual in that it has a large number of hotel rooms that were repurposed for short-term disaster survivor housing. We commend this effort overall as it was intended to be humane and immediate and to keep families on the island. Relief efforts were made quickly, as over 7,000 people were displaced in one day. This is not a simple landscape to manage for immediate housing. In every fire this is very complicated but on an island with a pre-existing housing crisis, it is even more challenging to provide sheltering programs, in this case up to six months (Feb 8, 2024).

We hope there is a review of the program in the coming year to assess what worked, what did not, and what can be learned for next time. We talked to people in the hotels, NGOs providing services, housing advocates, and people in the public sector. We recommend surveying them formally to learn more about what can be turned into a best practice and what should be avoided next time.

Our listening is not a formal process, but we can relay the following:

- ✓ Better systems to ensure eviction notices are not sent out on accident;

- ✓ Commitment to not move fire survivors more than 2-3 times over the six months. Some survivors were moved 8 times with little notice, only to find themselves carrying their belongings in trash bags and buckets to the next hotel and having to wait, sometimes hours, to be checked into new rooms. We appreciate Mayor Bissen's order to cease moving of fire survivors over the holiday;
- ✓ Rethink the prohibition on using the hotel's facilities and amenities, if accurate. We were often told that families were not allowed to use the pools to recreate during their stay. We cannot confirm this as fact.
- ✓ Reconsideration of housing fire victims with tourists. We appreciate the desire to open Lahaina for business, but it was an awkward decision. We were told tourists wanted to be thanked by the workers for coming to Maui. Granted, there are likely reasons why the co-mingling was deemed necessary, but perhaps there can be a tweak next time that moved all fire victims into fewer hotels, much like the Royal Lahaina, and this will also provide the ability to use the amenities and concentrate services post-disaster.
- ✓ Restructuring/reframing of every other day phone calls to fire victims. Though these are meant as "wellness calls," they were often interpreted as "check up" or enforcement calls. While we do not assign any ill will, this was relayed as particularly problematic for a population already experiencing a trust gap with institutions and government.



Disasters are always a mix of wins and losses, practices and lessons. Each area has pre-existing conditions determining how and where disaster protocols will be implemented. A rule at After the Fire USA is also to export our errors, mistakes, and lessons learned.

We've yet to see any area get it ideally correct the first time. Still, as a matter of resiliency, we strongly encourage Maui (and greater Hawaii) to prepare for the next time by auditing all areas of the response, especially rehousing. Maui and the partners have a lot to be proud of and to export as best practices.

Rebuilding: Lessons Learned + Recommendations

Rebuilding is central to recovery for a community impacted by a mega fire. However, rebuilding is a complex process wrought with challenges that begin with the debris removal process and continue into design, infrastructure limitations, permitting, financial considerations, construction, supply chains and labor availability. On Maui, all of these issues are magnified and will require significant assistance and coordination from government grants and other funding sources as well as innovative housing and building solutions.

Current rebuilding estimates are ranging from \$650 - \$1,300 per square foot. In comparison, the average cost to build a home on the mainland is dramatically less expensive. In California, one of the most expensive states to build in the United States, the cost is approximately \$500 per square foot. In Oregon, another state heavily affected by megafires, the cost to build a home in 2024 is \$170 per square foot.

These high costs per square foot are further complicated by supply chain issues of getting supplies and materials to the Hawaiian Islands, with transport times exceeding 120 days. Further, limited labor pools in trades needed for the rebuilding of thousands of properties is prevalent throughout the country and even more so on Maui.

Median household income statistics, homeownership rates and land use issues in Maui demonstrate some of the immediate hurdles to rebuilding. The median household income in Lahaina was \$80,035, slightly lower than the median income in Maui County (\$88,249) and Hawaii (\$88,005). The per capita income in Lahaina was \$30,803, also lower than the per capita income in Maui County (\$38,956) and Hawaii (\$39,045). The poverty rate in Lahaina was 11.8%, higher than the poverty rate in Maui County (9.5%) and Hawaii (9.5%).

The homeownership rate in Lahaina was 49.7%, lower than the homeownership rate in Maui County (63.9%) and Hawaii (61%). The median value of owner-occupied housing units in Lahaina was \$720,500, higher than the median value in Maui County (\$676,800) and Hawaii (\$662,100). The median gross rent in Lahaina was \$1,692, slightly higher than the median rent in Maui County (\$1,667) and Hawaii (\$1,646).

The generational ownership of land in Maui and Lahaina is influenced by the legacy of colonialism and capitalism, which displaced many native Hawaiians from their ancestral lands and transferred them to foreign and corporate owners.

Funding from the Building Resilient Infrastructure Communities (BRIC) grant program the Inflation Reduction Act (IRA), relief from fees and permits as well as private donations are some of the solutions to help further the success of the rebuilding process.

Often, counties and cities will rollback their building codes to allow for less expensive rebuilding costs, but we do not recommend this for Maui's rebuild for a few reasons:

- ✓ There are more federal and private funds available in 2024 to become energy and climate resilient;
- ✓ Maui is especially vulnerable to multi-peril disasters, including seismic, wildfire, tsunami, wind events. Now is the time to rebuild equitable and climate resilient housing stock for the next 100 years;
- ✓ Maui is very well situated and experienced in solar energy and electric vehicles. The climate and sun exposure are idea for these uses.

Mitigating the Cost of the Rebuild: Waiving Impact + Permit Fees; Education for Rebuilders

In Malibu, CA after the devastating 2018 Woolsey Fire, the [city waived all permit fees associated](#) with rebuilding in order to provide financial assistance to fire survivors. This same waiver occurred in Sonoma County, City of Santa Rosa, in California and Boulder County, Colorado (Cities of Louisville and Superior) after the Marshall Fire.

This type of waiver is one effective policy tool for local government to deploy that can assist fire survivors in their rebuilding efforts. Most, if not all, cities and counties waive impact fees for rebuilding to reduce the costs of rebuilding – which skyrocket post-disaster. The reasons vary, but are common and include:

- ✓ Areas with higher wealth individuals often have and want to replace custom homes. While the cost of building a custom home is always higher than a subdivision, it is even more dramatic when the demand for custom home builders and their subcontractors becomes immediate and pervasive in a given area. These areas often see a delayed rebuild that is much slower than “grid” rebuilds;
- ✓ Neighborhoods that banded together for group contracts with fewer builders fared much better in rebuilding timelines and brought down cost per square foot. However, contractor fraud will remain a problem throughout the rebuild and must be monitored for at least five (5) years closely;
- ✓ Subcontractors are less expensive to schedule and organize logistically when they are working in a production model subdivision;
- ✓ Lack of available skilled workforce means demand dramatically increases along with labor costs. We highly recommend immediately connecting with labor force training programs in the trades to train the existing population, especially because there are ~7,000 impacted workers locally (minus the ones who have relocated off island post-disaster) and a considerable housing crisis.

We also recommend increasing education about contractor fraud, checking licenses, and if possible, convene builders weekly then monthly for the first 1-3 years post-disaster. This allows them to share information and learn about new materials, innovations, and opportunities.

In Sonoma County, [The North Coast Builders Exchange](#) hosted these meetings for approximately two years. These meetings provided a place for not only builders but also training programs, NGOs, media, and elected officials, and they have a robust program that helps all stakeholders navigate construction and avoid fraud. They created a very successful program to replace tools lost in the fire and hosted webinars to educate the fire survivors on the rebuilding process.

This service was hugely valuable for the rebuilding of Sonoma County and the entire North Coast (Mendocino and Lake County). We are able to connect Maui to the organization if desired.

Other solutions to the rebuilding challenges include furthering the use of innovative building materials, energy and water conservation tools, and pre-fabricated homes. The use of technology that can create large-scale robotic construction that can deliver high-quality homes quickly should be considered and included as priorities for rebuilding. There are companies innovating at scale right now to increase awareness and adoption of climate-resilient housing that is also beautiful.

Infrastructure

Water Issues and Impacts

- Wildfires often damage or destroy the water infrastructure that supplies water to various parts of the affected areas, such as pipes, meters, valves, hydrants, and service lines. This can leave thousands of residents and businesses without water or with contaminated water for months. We've seen this play out on Maui,
- Wildfires can also contaminate the water sources, such as streams and wells, that feed the water system. The contamination can come from ash, soil, chemicals, or plastics that are carried by runoff or leached into the groundwater. This can affect the water quality and the treatment plant operations.
- Wildfires can expose the vulnerability and unsustainability of the water system, which faces challenges from drought, climate change, and population growth. These factors increase the demand and stress on the water resources and require more investment and management to ensure water security and

resilience. On Maui, the laterals will have to be replaced in Lahaina, but the main lines appear to be intact.

- Wildfires can also renew the tensions over water rights and management in the affected areas, especially between the native and the colonial communities, who have a long history of conflict over sacred and scarce water resources. This is also true for Maui, where the majority (73%) of the water is privately owned and there is not enough water.



Examples of post-megafire problems with water infrastructure:

- In Santa Rosa, California, the 2017 Tubbs Fire caused extensive and unprecedented damage to the water distribution system in the Fountaingrove neighborhood. The fire melted plastic pipes and meters, releasing benzene and other volatile organic compounds into the water. The city had to replace more than 100 miles of water mains and service lines and issued a do-not-drink/do-not-boil order for more than a year.
- In Paradise, California, the 2018 Camp Fire virtually destroyed the town and much of the municipal water system. The fire also melted plastic pipes and meters and contaminated the water with benzene and other chemicals. The town had to flush, test, and repair the water system and issued a do-not-use/do-not-boil order for more than six months. While most advisories are now lifted, the utility recognized that property owners may not have removed all their contaminated infrastructure.
- In the San Lorenzo Valley, California, the 2020 CZU Lightning Complex Fires burned parts of the water infrastructure and contaminated the water sources. The fire destroyed water pipes, tanks, and pumps and affected the water quality and quantity in the streams and wells. The water district had to repair the damaged infrastructure, monitor the water quality, and distribute bottled water and water filters to the customers. The district also implemented water use restrictions and conservation measures to cope with the water shortage.

Mental Health Post-Megafire Disaster

During our first deployment, Mental Health concerns were raised by people of all ages and professions, including staff working on the response and recovery process. It was noted there is a stigma to using traditional counseling services, as well as the barrier for cost, location, and transportation. Staffing mental health needs is an ongoing concern on the island because the pay rate is fairly low considering the cost of living and housing issues. Many mental health workers choose to leave the island. To both One NGO found that activities that were low threat were effective in getting individuals to talk and open up about mental health and suicide. A mix uses of Western and native or Eastern practices may be the best blend of approaches for mental health and wellness.

After the Fire USA has met with mental health workers, traditional Hawaiian leaders, parents, fire survivors, and many nonprofit leaders serving Maui. We've brought Dr. Adrienne Heinz (see below) and Jolie Wills into these conversations to bridge the space between what has been created for survivor communities and what the people of Maui need in the space of mental health.

We are hearing that the 6-month mark is a difficult milestone because, as the adrenaline wanes, the "flight or fight" remains. We understand the long-term reality of recovery and rebuilding of Lahaina and Kula are setting in

Phases of Disaster



Source: Zinn/Meyers, as cited in U.S. Department of Health and Human Services. (2000). Training manual for mental health and human service workers in major disasters (DHHS Publication 90-638). Washington, DC: Substance Abuse and Mental Health Services Administration Center for Mental Health Services.

with the community. Parents are still in survival mode, but many are still living in hotels, and the attention has faded. What is next? What is needed now?

We often see this disconcertment post-disaster at this stage. It can be more upsetting than the initial week after the disaster because people are bone weary.

Recommendations:

1. Fund a coordinator to track and map all of the mental health care workers in Maui and the organizations that are active in this space for Maui. A landscape analysis would be constructive and reduce inevitable duplication of effort.
2. We understand many practitioners have been doing pro bono work post-disaster because the need came far before the funding, but this model is not sustainable. Mental health workers also have families and need to provide for them. We are familiar with the Medicare/Medicaid codes, and some insurance providers, such as Kaiser, do not allow for Community-Based Visits or Home-Based Visits as an insurable activity or an allowable billing code. These rules must be changed on Maui and for other disaster-affected communities. It is critical to meet disaster survivors where they are instead of requiring in-person office or clinic visits. This is particularly true in communities with historical distrust of Western medicine, psychological services, and governments.
3. Require Cultural Competency while facilitating (via funding and access) non-traditional means of engaging in mental health care, such as art therapy, "talk story" sessions, nature-based activities, and other means of engaging the traumatized population. ASKING is the most critical activity any disaster leader can do, followed by listening.
4. Funding for mental health services should be guaranteed for at least three years for recovery and rebuilding programs. Five years is optimum, but three years is the minimum. Post-disaster programs and processes take time to develop, and then each organization and practitioner must be prepared to pivot with the community's changing needs. They must be able to respond to these changes without risking their funding.
5. Don't forget the leaders: Help the Helpers. Helpers include civil servants, first responders, teachers, therapists, nonprofit leaders, and emergent leaders. Disasters are blessed with incredible leadership, but if it is not supported financially and emotionally, soon that wanes and the community suffers. Support = faster + better recovery for the community as a whole. This also assists with resilience when another disaster strikes. It is very common to see support systems weaken because the leaders are very traumatized, exhausted, or cannot afford to continue to do the frontline recovery work, and frequently are facing all of these obstacles. We recommend Jolie Wills of Hummingly.co and Susan Farren of First Responders Resiliency, Inc. for this work.

Constraints and Opportunities:

Hawaii faces several challenges in providing adequate and appropriate mental health care support services to its diverse and isolated population. Some of these challenges are:

- The scarcity of mental health providers and resources, especially in remote areas of the state.
- The need for more culturally sensitive and respectful care that honors the values and beliefs of different ethnic groups, such as Native Hawaiians, Asian Americans, and Pacific Islanders.
- The high rates of mental health problems among certain groups, such as Native Hawaiians, veterans, homeless people, and incarcerated people.
- The stigma and shame that surrounds mental illness that discourages many people from seeking help or sharing their struggles.

However, Hawaii also has some strengths and opportunities in improving its mental health landscape, such as:

- The Aloha spirit, a core value of Hawaiian culture that embodies love, compassion, and kindness. This unique ethos is reflected in Hawaii's Mental Health Centers, which offer clients a warm and caring environment.
- The cultural practices that foster mental well-being, such as ohana (family), aloha (love), ho'oponopono (conflict resolution), and spending time in nature. These practices can help people cope with stress, heal from trauma, and connect with others.
- Innovative programs that address the specific needs of different communities, such as telehealth, peer support, cultural healing, and integrated care. These programs can help increase access, engagement, and quality of mental health care for various groups.

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4. That's more than the population of Hilo. Mental Health in Hawaii. NAMI Hawaii.

<https://www.nami.org/NAMI/media/NAMI-Media/StateFactSheets/HawaiiStateFactSheet.pdf>

Debris Removal and Land Fill Issues

Debris removal is always a challenging component post-mega fire. As an island community, debris removal on Maui is particularly complex—initial estimates to remove all fire debris off-island exceed 10 billion dollars. The federal, state, and county government entities have determined that the most economical and efficient method to address debris removal is to remove hazardous materials off-island via barge while developing an on-island landfill space that can serve both as a repository for “non-hazardous materials” from the burn area while functioning as a burial ground for the remains still intermixed with the debris from the Lahaina and Kule Fires. We acknowledge the debris in the final stage of removal will contain toxic chemicals; therefore, when we say “hazardous materials,” we are referring to the stage of debris removal overseen by the EPA.

The on-island temporary landfill solution, perhaps the most logical answer, presents challenges for the Hawaiian people, as there are concerns about the possible toxicity of the debris being left on the island. This sensitive matter must be carefully navigated by all levels of government, and the recent community meetings are evidence of this controversy. After a lengthy council meeting and discussion, the Council approved the temporary landfill in January of 2024.

After the Fire USA supports innovation for all megafires areas – from resilience to recovery to rebuilding. We are aware of wonderful advancements in bioremediation and challenges with run-off. We understand the genuine concerns being raised about the short and long-term effects on the land and the sea. We also understand the need to move on with recovery and the steps being taken to remediate harm to the land designated for the temporary site.

We've watched the conversation play out; in this case, we don't have enough expertise to contribute meaningfully. We are confident the leaders already debating this issue know far more about the land, the people, the issue far better and our role is to learn. Our primary recommendation is to consider innovative advancements that often return to traditional methods to mitigate the potential harm. We will learn alongside Maui.

We've never seen the aftermath of megafire on an island, which is incredibly challenging given that Maui is set in the middle of a vast ocean. This is a primary reason we believe any innovation here will have positive repercussions throughout the space of megafire recovery.



Primary Relief Efforts and Community Organizations

Maui has an unusually gifted social network of emergency and official leaders who practice “Aloha” and “Pono” – in other words, there are preexisting norms, words, songs, and social structures that lend themselves to outstanding disaster responses. Here are a few:

- Maui Strong Fund, created by the Hawaii Community Foundation, provides disaster preparedness, response, and recovery resources.
- The Maui Food Bank collects and distributes food and other items to emergency victims.
- Maui United Way, which provides direct relief to families and nonprofits.
- The Salvation Army, which provides food and resources for evacuees.
- Public Schools of Hawaii Foundation, which partners with the state Department of Education to support school communities in West Maui.
- The Council for Native Hawaiian Advancement, which matches every donation to Maui fire victims.
- ‘Āina Momona, which establishes an emergency fund for Maui County first responders.
- Catholic Charities Hawaii, which works with other organizations to assess the critical needs of individuals affected by the wildfires.

- Maui Humane Society supports shelters for displaced people and animals and cares for injured animals.
- Hawaii Chamber of Commerce Hawaii Business Relief Fund, which assists the business communities on Maui.
- World Central Kitchen, which provides meals to people in need by partnering with local organizations.
- Hawaii Lions Foundation, which matches up to \$25,000 in donations for Maui disaster relief efforts.
- Hawai'i People's Fund, which provides immediate relief to those directly impacted by the wildfires on Maui Island.
- FEMA, which provides a one-time payment of \$700 per household to applicants who were displaced from their homes and have critical needs.
- The Global Empowerment Mission (GEM) is a nonprofit organization that supports communities affected by disasters worldwide. They have provided immediate and long-term assistance to the Maui fire victims, such as BStrong cash cards, Airbnb vouchers, rent abatement checks, modular homes, tools for contractors, and family necessities kits. They have also partnered with the Office of Hawaiian Affairs to match donations for the fire relief. NOTE: GEM is partnered with Good360
- The Maui Medic Healers Hui is a grassroots, community-driven, Native Hawaiian-led organization that provides health care and trauma support to the fire survivors. They have been staffing a site at the Kahana boat ramp, where they offer bandage changes, nebulizer treatments, and talk story sessions. They also work with other organizations to provide culturally competent care and healing.
- The Native Hawaiian Philanthropy (NHP) is a native-serving organization that empowers native Hawaiian communities with resources and support to improve their socio-economic conditions. They have been working with 12 nonprofit organizations, a hula halau, businesses, and medical professionals to provide direct services to Lahaina families impacted by the fire. Each organization has a unique, culturally grounded approach to providing aloha, kokua, and anemone. They have also joined the Council for Native Hawaiian Advancement to match donations for the fire relief.

Hubs: Service, Compassion and Innovation

Hubs are community-run sites that provide access to relief application assistance, legal aid, document replacements, mental and physical health support, Foodland vouchers, HEPA air purification systems, workforce training, and financial support. Some of the hubs are located at the Kahana boat ramp, the Lahaina Civic Center, the Lahaina Baptist Church, and the Lahaina Intermediate School.

One major accomplishment for Maui and FEMA was the shift to move FEMA into community hubs where needed. Culturally, going into a gym and navigating the circle of services doesn't work for everyone. We were heartened to see FEMA agree to attend hubs to ensure services were extended to all survivors.



Council operates one notable hub we visited for Native Hawaiian Advancement called Kāko'o Maui which is set up physically and emotionally more culturally appropriate and primarily operated by Native Hawaiians.

From their website: <https://www.hawaiiancouncil.org/helpmaui/mauiresources/>

Service Providers at the Resource Center

The hub will host both non-profit service providers and representatives from various agencies, on a rotating basis, including:

Imua Family Services – Healthcare navigators from Imua Family Services help eligible residents in Maui County apply for and enroll in health and medical coverage. They provide assistance with Med-QUEST and the Federal Health Insurance Marketplace, as well as navigating qualifications for subsidies such as Premium Tax Credits and Cost Share Reductions.

FEMA: Federal assistance is available to eligible individuals and families affected by this disaster.

Hawai'i Cares- If you need mental health, substance use, or suicide prevention support, please contact Hawai'i CARES 988 by calling or texting 988, 24/7 or visit us at the Kāko'o Maui Resource Center. (If you are experiencing a medical or psychiatric emergency please call 911 or go to your nearest emergency room)

Hawai'i Community Lending – Hawai'i Community Lending's long-term goal is to assist those impacted on Maui to rebuild their homes by preventing foreclosure and securing land access, providing financial aid for disaster victims, administering the Kanaka Anti-Displacement fund to protect Native Hawaiians, and by providing a dedicated team working to make rebuilding easier.

Hawaiian Community Assets – Hawaiian Community Assets and Hawai'i Community Lending (HCL) has launched a two-phase Maui Response and Recovery Strategy to increase public awareness and access to homeowner insurance, disaster assistance, and grants and loans for recovery and rebuilding.

Native Hawaiian Legal Corporation – NHLC provides legal services to empower Native Hawaiian families, cultural practitioners, and communities as they defend and assert their legal rights in Native Hawaiian law.

Legal Aid Society of Hawai'i – Public interest, non-profit law firm dedicated to achieving fairness and justice through legal advocacy, outreach, and education for those in need.

Makai Foundation– works to catch fire survivors falling through the cracks in the system and to meet unmet needs in the community, to help build resiliency and restore hope.

Maui Behavioral Health Resources – MBHR has the full range of mental and emotional well-being – from the basics of how one copes with day-to-day challenges of life, including family relationships, to the treatment of mental illnesses, such as depression or personality disorder, as well as substance use disorder and other addictive behaviors.

Maui AIDS Foundation – MAF is a nonprofit 501(c)(3) health and social service organization always striving to meet the needs of the Maui County community. MAF offers health insurance enrollment assistance.

Maui Family Support Services – To promote healthy family functioning by providing supportive services which build on family strengths.

Re- Entry Vehicle Passes (Maui Recovers): Vehicle pass applications and on-site distribution. Vehicle Pass distribution 8am-4pm.

Important: Residents should sign up to receive notifications for any updates on changes to Zone openings at www.mauicounty.gov/mema.

Right of Entry, Debris Removal Consolidation: The County of Maui, State of Hawai'i, FEMA and local officials will coordinate with the U.S Army Corps of Engineers to offer a government-sponsored debris removal program. Maui County residents and businesses whose properties were destroyed by the wildfires have the ability to use the government-operated Maui County Consolidated Debris Removal Program to ensure that their property is cleared of hazardous materials and debris. To obtain service through the government-sponsored program, a property owner must complete a Right-of-Entry (ROE) form to allow these agencies to clean up a property.

SBA: SBA disaster assistance for homeowners, renters, nonprofits, and businesses of all sizes affected by the Hawaii wildfires.

They also run a large distribution center called Kahului Distribution Center with partners and sponsors, now focused on corporate donations and moving past the individual donations model. We applaud this shift as individual donations quickly become untenable and unmanageable on a larger scale. The center is large, well-placed for access, and well-managed.



Proposed Maui Settlement Fund: What, Why and Examples of Previous Funds

The Maui Fire Settlement Fund is a \$150 million initiative announced by Governor Josh Green on November 8, 2023, to compensate the families of those who died or were seriously injured in the Lahaina fire of August 8, 2023. The fund is part of the One 'Ohana Initiative, which aims to help the Maui community recover from the disaster and improve the emergency management system. The fund is supported by the state, Hawaiian Electric, Kamehameha Schools, and Maui County, and is expected to have more partners in the future. The fund offers voluntary payments of more than \$1 million to each eligible beneficiary, who will waive their right to sue the fund's partners for any claims related to the fire. The fund is intended to provide faster and more certain relief than litigation, which could take years and be costly. The fund will also help rebuild homes and businesses destroyed by the fire.

For more information:

1. Governor of Hawaii. (2023, November 8). [FUND ANNOUNCED FOR MAUI WILDFIRE SURVIVORS WHO LOST LOVED ONES, OR WERE INJURED](#)¹

2. Civil Beat. (2023, September 5). [Resources For Maui Fire Survivors: Where To Get Help2](#)
3. ABC News. (2023, August 17). [Maui Strong: Charities to directly support wildfire relief efforts3](#)

Fire Victims Trust (North Bay Fires 2017, Camp Fire 2018)

The Fire Victim Trust was established in 2020 after the bankruptcy of PG&E, a utility company responsible for several wildfires in California that killed hundreds of people and destroyed thousands of homes. The trust offers, in theory, an efficient and equitable claim review process to compensate fire victims for damages caused by the 2015 Butte, 2017 North Bay, and 2018 Camp Fires. As of November 15, 2023, the trust has received 40,377 submitted claims questionnaires, with 71,011 claimants receiving determination notices. The total amount awarded in determination notices is \$18.74 billion, with \$10.74 billion paid to claimants.

Issues:

- The complexity and bureaucracy of the application and eligibility process, which requires documentation and coordination with multiple agencies.
- There was difficulty verifying the ownership and occupancy of homes, as many were unpermitted, informal, or inherited.
- The expiration and termination of some programs, such as the Transitional Sheltering Assistance, left many survivors without a permanent housing solution.
- The insufficient and delayed funding from the federal government hindered the recovery and rebuilding efforts.
- The uncertainty and volatility of the PG&E stock, which makes up a large portion of the trust's assets, affects the amount and timing of the payments to the claimants.

What is the current status?

The current state of PG&E Fire Victims Trust is that it has increased its payments to fire victims to 60% of their total determination as of January 31, 2023, thanks to the sales of PG&E stock. However, the trust still faces many challenges and criticisms, such as the complexity and bureaucracy of the claims process, the difficulty of verifying the ownership and occupancy of homes, the uncertainty and volatility of the PG&E stock, the lack of transparency and accountability of the trust's management, the unfair and inconsistent treatment of the claimants, and the violation and disregard of the rights and interests of the claimants. The trust has received more than 37,000 claim submissions representing over 68,000 claimants and approximately 238,000 individual claims and has disbursed over \$1.88 billion to more than 35,000 victims. The trust aims to complete the claims review process by the end of 2023 and pay the remaining 40% of the determinations by 2024.

Lessons Learned from the PG&E Fire Victims Trust:

- It is essential to have a **transparent and accountable trust management and operation** that can inform, educate, and assist the claimants and avoid mismanagement, conflicts of interest, and excessive fees.
- There is a need for a simple and efficient claim review and payment process that can verify the ownership and occupancy of homes and deliver the compensation to the claimants in a timely and consistent manner.
- The challenge of having a **stable and reliable funding source** that can ensure the full and fair payment to the claimants and avoid the uncertainty and volatility of the PG&E stock.
- It is valuable to treat the claimants fairly and respectfully to honor their rights and interests and avoid pressuring them to accept lowball offers, sign releases, or waive their right to sue.

Other examples of Victim Compensation Funds:

- The **September 11th Victim Compensation Fund** provides financial assistance to the victims and families of the terrorist attacks of September 11, 2001, and the responders and survivors of the aftermath.
- The **International Terrorism Victim Expense Reimbursement Program** reimburses eligible victims of international terrorism for expenses associated with medical care, mental health care, property loss, funeral and burial, and miscellaneous costs.
- The **National Vaccine Injury Compensation Program** compensates people injured by certain vaccines, such as the COVID-19 vaccine, and covers medical expenses, lost earnings, and pain and suffering.
- The **National Compassion Fund** collects and distributes donations directly to the victims of mass casualty crimes, such as the Pulse nightclub shooting, the Las Vegas shooting, and the Parkland school shooting.

Challenges of Implementing Victim Compensation Funds:

- The **application and eligibility process** for the fund is **complex and bureaucratic**, requiring documentation and coordination with multiple agencies.
- **Verifying the ownership and occupancy of homes** is **complicated** as many were unpermitted, informal, or inherited.
- The **funding source** for the fund is **uncertain and volatile**, as it may depend on court fines, fees, or stocks and affect the amount and timing of the payments to the claimants.

- The **management and operation** of the fund lack **transparency and accountability** and may be accused of mismanagement, conflicts of interest, and excessive fees.
- The **treatment of the claimants** is **unfair and inconsistent**, as they may face delays, errors, and discrepancies in their claims processing and payments.
- The **rights and interests of the claimants** are **violated and disregarded**, as they may be pressured to accept lowball offers, sign releases, or waive their right to sue the fund’s partners.

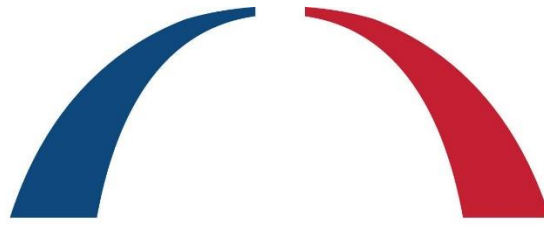
Financial Resources: Fannie Mae “Here to Help”: Mortgage + Insurance

We strongly recommend the people of Maui engage actively with the services of Fannie Mae, especially as the recovery and rebuilding stage unfolds. Since January 2018, Fannie Mae has been one of our most impactful partners in navigating our lives and executing our mission. Fannie Mae is radically different from most big stakeholders in recovery because they stay for the long term.

Anyone can access Fannie Mae’s Disaster Response program through your mortgage servicer or Fannie Mae’s Mortgage Help Network. You can also call 855-HERE2HELP (855-437-3243) to access disaster recovery counseling or other resources. Fannie Mae’s Disaster Response program assists homeowners and renters affected by natural disasters such as hurricanes, fires, floods, earthquakes, and other disasters. [Disaster Response | Fannie Mae](#)

The program offers payment relief, loan modifications, and recovery support provided by HUD-approved housing counselors through Fannie Mae’s disaster recovery counseling services. Fannie Mae also provides help navigating the broader financial effects of national emergencies to homeowners with a Fannie Mae-owned mortgage, including a needs assessment and personalized recovery plan, as well as help requesting financial relief from insurance, servicers, and other sources.

For mortgage loans not yet acquired by Fannie Mae, the Selling Guide describes policies related to properties affected by a disaster. Servicing policies related to disasters are included in the Servicing Guide. The Disaster Response program is committed to offering the tools and flexibility lenders, and servicers need to effectively assist homeowners and renters affected by natural disasters.



BIPARTISAN POLICY CENTER

Policy Review: [Five Months After the Fire: Five Takeaways from Maui's Recovery](#) | [Bipartisan Policy Center](#)

Five months after the devastating Maui wildfires, disaster response efforts are still working to address the urgent needs of survivors. The island has a long road ahead before it fully recovers, with significant housing, infrastructure, and economic challenges.

1. [Survivors still need stable housing while Lahaina rebuilds.](#)

As of December 15, about 6,000 survivors were living in hotels, a number FEMA says is dynamic and changes daily. Due to the shortage of available homes, finding stable, medium-term housing for survivors to transition into after they move out of hotels is a pressing challenge, as Lahaina could take years to rebuild its housing stock. According to the American Red Cross, the average cost to house a family through the Non-Congregate Sheltering program on Maui is approximately \$1,000/day (including meals and administrative costs). Some survivors staying in hotels have had to relocate [multiple times](#), adding to their turmoil and making it difficult to get back on their feet.

Only a very [small number](#) of survivors have been able to utilize FEMA's rental assistance to secure long-term housing because of the lack of available rental units. Meanwhile, some survivors [relocated](#) out of Hawai'i in their search for housing.

One potential source of housing for survivors is short-term rentals (STRs). There are more than [12,000](#) STRs on Maui, by one estimate, though as of late November, only [a few hundred](#) were staying in STRs. In December, FEMA issued a [press release](#) offering to pay "fair and stable" compensation to STR operators housing survivors and is [working](#) to secure more long-term rental housing options for survivors currently in hotels to move into. The Maui County Council has also considered tax incentives for STR operators to house survivors and a moratorium on STRs. However, concerns remain about whether STR

operators will be persuaded to house survivors, and the proposed moratorium could face legal challenges.

Promisingly, the state of Hawai'i, the County of Maui, and a group of philanthropic organizations recently partnered to [announce](#) a \$500 million plan to provide stable housing for a few thousand households, with 18-month commitments for each household by July 24, 2024.

2. Maui faces a broader long-term housing crisis.

Even before the fire, Maui faced a severe housing crisis. Maui needs to rebuild its lost housing stock and dramatically expand its supply of affordable housing. Hawai'i has the [highest](#) median home value in the nation, as well as the fourth highest level of homelessness. Since 2000, Maui has experienced over 300% price growth in homes. Many locals working service jobs, particularly in the tourism industry, do not make incomes that can meet such high housing costs. In Maui County, [more than 50%](#) of renters are cost-burdened (paying over 30% of their income on rent) and nearly 30% are severely cost-burdened (paying over 50% of their income on rent).

Constructing new homes on the island is slow and difficult, in large part due to regulatory hurdles, according to Justin Tyndell, an economist at the University of Hawai'i at Mānoa. Restrictive zoning rules, multiple levels of review, ease with which local residents can block new projects, ecological and cultural preservation requirements, and strong affordable housing requirements can all make it more costly and difficult to build new housing. In fact, research from Tyndell and colleagues found Hawai'i to have the [most restrictive](#) local housing regulations in the nation, with Maui as one of the most restrictive counties.

Many locals are worried about “gentrification by fire,” a process where local prices rise because of the reduced housing stock—a [common result](#) when natural disasters occur. Even before the fire, many Native Hawaiians had left Maui and Hawai'i due to high housing costs. In 2020, 47% of Native Hawaiians lived in Hawai'i as opposed to the continental U.S., down from 55% in 2010.

3. Infrastructure needs to be rebuilt and enhanced.

In addition to housing and property destruction, Maui experienced severe damage to its critical infrastructure. For example, more than [2,200](#) water service lines were damaged. Rebuilding all of the water infrastructure could take years and cost much as [\\$80 million](#), according to a local official's estimate. Beyond restoring clean and safe water service, Maui's water infrastructure demands modernization to enhance future resilience and capacity.

During the wildfire, Lahaina's water system failed to produce enough water in fire hydrants for firefighters to tame the fire. When properties were damaged, water was [released](#) from melting pipes, depressurizing

the level of water for hydrants. The water failure during the wildfire brought attention to broader water infrastructure challenges on the island.

According to FEMA, severely limited water, sewer, and other critical infrastructure capacity is a major barrier to supporting housing development, compounding challenges to building up the supply of affordable housing. In the [Lahaina area](#) specifically, the underground aquifer that served residents was [oversubscribed](#) prior to the fire, according to state data, and the viability of the aquifer is a factor limiting additional housing development (though previously existing units that are rebuilt would have “grandfathered” access).

4. Unemployment has risen as tourism has dipped.

More than [800 businesses](#) and the major tourist hub of Lahaina were impacted. According to the Bureau of Labor Statistics, the unemployment rate was 6.2% in November 2023, up from 2.5% before the fire; this is largely due to the decline in tourist travel to the island after the fire. Prior to the fire, tourism contributed to [about 40%](#) of the island’s GDP, but businesses that serve tourists have had to cut back on staff with fewer visitors.

While bringing back tourism will support employment and economic activity, with a limited stock of housing and hotel units, there is tension between housing survivors and providing lodging for tourists. Attitudes towards reviving tourism are mixed—while many workers in the tourism industry are supportive, many residents are frustrated about the return of tourists while survivors deal with trauma and lack stable housing.

Across the state, many residents feel the tourism industry doesn’t fully support Hawaiians: According to a [2023 survey](#), while 67% of state residents view the tourism industry in Hawai’i favorably, 67% also feel that their island is being run for tourists at the expense of local people. This may reflect that, while the tourism industry provides jobs, wages are low relative to the high cost of living. Indeed, while unemployment was low in the months before the fire, the percentage of households in Maui below the poverty line still rose from 6% in 2018 to [16% in 2022](#).

5. Survivors are dealing with profound trauma.

In addition to physical and economic needs, Maui residents are also dealing with the [trauma](#) associated with a catastrophic natural disaster. Mental health—for both survivors and leaders of recovery efforts—is an important component of disaster recovery. Many survivors have described having trouble leaving their homes and returning to work, suffering from [survivor’s guilt](#) and traumatic flashbacks.

Trauma makes it difficult for individuals to navigate federal assistance programs to access federal resources to address housing and property damage and other disaster-related costs. Recovery efforts

must keep the trauma of impacted communities in mind. Beyond providing mental health services, recovery efforts require reaching survivors who may have limited wherewithal, providing case management to help survivors manage their recovery journeys, and removing hurdles to accessing assistance.

Bi-Partisan Policy Center Conclusion

Maui has a long road ahead as it transitions from short-term disaster response to long-term disaster recovery. With a budget shortfall of over [\\$31 million](#) due to a decrease in property taxes from damaged homes, the county has limited capacity to manage a massive rebuilding effort on multiple fronts.

Federal support will be essential for Maui's successful recovery. HUD's CDBG-DR program will be a critical tool for meeting long-term housing and infrastructure needs, not only to provide survivors a place to live with water access but also to rebuild thriving communities where locals can afford to live and prosper. With sufficient federal resources, Maui can rebuild Lahaina while investing in housing and infrastructure to better meet future generations' needs.

These observations were informed by BPC's participation in a December delegation to Maui organized by [After the Fire](#), a non-profit organization created by wildfire survivors and experts to support communities as they prepare for wildfires and recover, rebuild, and reimagine a more resilient future after a wildfire.

Closing Thoughts

The challenges facing Maui are complex and will take many years to resolve. Our visit provided the delegation with an opportunity to listen to the concerns and issues from all sides. We designed our delegation to provide 360-degree expertise in local, state, and federal navigation after a disaster. We ensured we included fire survivors and community leaders as well as senior management of national NGOs, leads in state government for recovery, former heads of IA for FEMA, and CDBG-DR Block Grants for HUD. We brought a building department lead for Sonoma County, where we have experienced four megafires in total (2017-2020), losing 7,000 homes and rebuilding 95% in under five years post-disaster.

When designing the itinerary, we ensured we met with leaders from the federal, state, and local governments. We met with formal and informal service-based organizations. We listened to housing advocates and environmental experts. We met fire survivors; we heard fire stories. We saw the wreckage wrought by the megafire in the town of Lahaina, and we witnessed the work of the incredible people of Lahaina. We met emergent leaders and long-established cultural leaders. We listened to everyone from hotel clerks to FEMA Region 9 Administrator Bob Fenton.

What was very evident here is everyone wants the same outcome: An Equitable Recovery. A recovery that takes pre-existing problems, like the housing shortage and near-total economic development for tourism, and is not well-balanced for the people of Lahaina. At the beginning and end of the day, Lahaina is a small town, a community of people, a village of great historical and spiritual significance – and the recovery should take the people into account first. In a reimagining of Lahaina, this first priority can guide all decisions.

It is highly unusual to hear the same goals throughout the landscape of recovery. But hear them we did – over and over again. Maui has an opportunity here that no other megafire community has ever had: to reimagine their home and to leverage unprecedented resources in service to getting fire survivors home.

High-Level Long-Term Recommendations

Community Planning Process:

Begin now to secure a firm that has the capacity to engage in a robust community planning process. To be clear, no one is going to get everything they want, but it is entirely likely that a thoughtful and energetic planning process will allow Maui to cohesively and even quickly recover and rebuild. Paradise utilized this model with the “Make it Paradise” planning process with success. We do caution stakeholders to acknowledge Paradise and Maui are very, very different recoveries – the land values, demographics, history, and opportunities are vastly different.

We recommend engaging with a firm that is well-rooted in Hawaiian culture, history, economics, and the spirit of Aloha. If not based in Hawaii currently, then ideally, the primaries are from Maui, Hawaii.

Funding Source: HCF's "Maui Strong Fund" + Public Sector (Federal)

Map the Landscape of Federal Fund Opportunities

Unlike most other fires, except for the Marshall Fire in Boulder, Colorado, there are newly established federal funds that can be deployed for the county and survivors to rebuild back safer, more climate resilient, temperature stable, and with beautiful designs that are accessible for all income levels. We recommend working with Senator Hirono, Senator Schatz, Rep. Tokuda, and leadership at FEMA to learn how to access as much of this funding and the technical support needed to apply and manage these funds.

Of note, Tennis Wick, Permit Sonoma Director, and a delegate has already begun to connect the County of Maui with the County of Sonoma to share best practices and information about the first [BRIC Grant](#) given to a wildfire community. Mr. Wick's department oversees the implementation of this grant. Generally speaking, we recommend the County of Maui request the assistance of Mr. Wick formally on a quarterly basis in Maui. He is particularly gifted and experienced in serving a rebuilding community with vision, humanity, and competency.

We recommend a landscape analysis of the following:

- ✓ Inflation Reduction Act
- ✓ Bipartisan Infrastructure Bill
- ✓ CHIPS Act
- ✓ CDZR Act (FEMA)
- ✓ BRIC (FEMA)

Embrace a Big Vision: Rebuild Lahaina as a "World's Faire" of Equitable, Resilient Innovation in Housing and Infrastructure

Of all megafires, Maui is arguably the most tourism-dependent community affected in this Era of Megafires. This is a problem, and an opportunity to leverage the attention of Maui to request innovators in materials and housing models demonstrate their products and programs on Maui. This must be in conjunction with the planning process and not an experiment. Companies should be scaled and bonded.

One local leader stated, “We should have a competition with a million-dollar prize for innovation and design for Maui where people and companies bring their best ideas to us.” This is very possible, and there are precedents. HUD held these competitions for beautiful Affordable Housing designs with successful results.

There are many innovations in the space of climate resiliency that are not well-known. This is a great opportunity for Maui to be on the frontlines of a green economy that can also help to diversify their economy and enact job training for “no collar” jobs – high-paying jobs that do not require a college degree. The Biden/Harris administration has marked this as an investment priority, and we are seeing the fruition via the CHIPS Act.

Innovations can and should also focus on water conservation as Maui has a difficult water problem for many reasons, including the fact that at least 70 percent of the water is not publicly owned but instead privately owned. There are many innovations in this space, for example, with wastewater, water retention, groundwater recharge, and coastal protections – all of which can not only improve the quality of life for the people of Maui but also contribute positively to the environment + resiliency. There are precedents and support for advising Maui on adaptable models.

We recommend conferring with Tennis Wick as well as [Urban Land Institute](#)’s team of experts on these recommendations.

Further, we recommend connecting with the nonprofit [Sierra Institute](#) and the Executive Director, Jonathan Kusel, on their process post-Dixie Fire. It is innovative, resilient, and beautiful.

Housing Resources & Recommendations

We applaud FEMA, Governor Green’s Office, Mayor Bissen + County of Maui staff, Red Cross, and HCF on their innovative public-private partnership to address short-term rental housing conversions, creation of the Lahaina Land Trust, and all measures taken to ensure Lahaina remains in the hands of the people of Maui. The recommendations and resources below are meant to support current and future efforts.

[Housing Plan Library: Bringing Down Rebuild Costs, Speeding Permit, Encouraging Quality](#)

In 2019, Charles Brooks of the Rebuild Paradise Foundation (RPF) recognized an opportunity to streamline rebuilds, provide choices, and reduce the costs of rebuilding in his community. The [Housing Plan Library](#) took about 18 months from conception to implementation. It was a collaboration that brought in architects to design SFD and provide these for free via the Rebuild Paradise Foundation. The result is five years later, the program continues to help people build in Paradise. *We also encourage checking out their Missing Middle Grants, Drone Survey Program, and Septic Tank Replacement Program.* As we’ve stated previously, the Camp Fire recovery and

Maui Fire recovery will look dramatically different, but in this sense, their lessons are best practices that are adaptable.

Furthermore, Texas GLO also implemented a Housing Plan Library Program under delegate Dr. Christa Lopez's leadership. Please find the links below. Dr. Lopez is happy to connect directly with the County of Maui and/or NGOs on this process, lessons learned, and, notably, the plans that accounted for resiliency in multiple perils.

Resilient Home Program: Texas GLO

This program was implemented using **CDBG-DR/MIT** funding to build homes more resilient to the natural hazards faced in Texas including floods, hurricanes, fires/wildfires, tornadoes, and high winds.

Resilient Home Brochures

- [Resilient Homes Overview](#)
- [Tilt Wall Construction Floor Plans](#)
- [Structural Composite Floor Plans](#)
- [Wood-Frame Floor Plans](#)
- [Steel-Frame Construction Floor Plans](#)
- Alternative Housing Study – Texas General Land Office
<https://recovery.texas.gov/documents/planning-studies/resilient-housing-data-analysis-report.pdf> and <https://recovery.texas.gov/documents/planning-studies/resilient-housing-final-research-and-inventory-development-study.pdf>

The Texas General Land Office has other documents that may serve as a resource for other States conducting a temporary housing program. If your state/jurisdiction is conducting such a program, please contact heather.lagrone.glo@recovery.texas.gov or christaflopez@gmail.com, and we will be glad to assist and provide program documents.

ADDITIONAL NOTES: These direct housing solutions may later be made available for sale or donation through the FEMA sales and donation program (typically towards the end of the program).

The donations program comes with some strings, usually requiring the entity taking possession of the donated unit to maintain the insurance and maintenance for a length of time determined by FEMA.

The workaround is that once FEMA turns over the title to the unit, it is no longer legally owned by FEMA, and they cannot say what can and cannot be done with something that is no longer legally theirs. However, if FEMA keeps possession of the title, then they are the legal owners, and thus, they must keep the insurance and maintenance. So, if a jurisdiction or entity is concerned about the requirements of the sales and donation program, they should take these factors into consideration. ***Please refer to your own legal counsel for any final guidance.***

Pre-disaster recovery plan and Housing Recovery Support Function (RSF) plan templates.

These tools can be adapted for post-disaster recovery efforts and are free to the public. https://houstonuasi.com/pre-disaster_recovery_plan_template/

https://houstonuasi.com/housing_recovery_support_function_annex_template/

Recovery Peer Planning Workshop Tools <https://houstonuasi.com/planners-work-group/peer-planning-workshops/recovery-peer-planning-workshop-spring-2019/>

We strongly recommend Maui NGOs fund the creation of a Housing Plan Library using traditional Hawaiian architects and designing every size of the home, from ADUs to 1,2,3+ bedroom homes.

Further, we recommend convening with RPF directly to ask about long-term program administration, lessons learned, site survey exceptions, and investor and developer relations (as the program is meant for individuals primarily).

Regular Delegations of Experts, Survivors, Advisors

Per After the Fire USA's model of listening first, then providing experts, we recommend Maui County, HCF, and other NGOs regularly bring people to Maui to listen, advise, learn, and share best practices and programs. We have every confidence Maui is creating best practices that can help other communities, but for the next few years, we recommend Maui engage in regular collaboration and discourse to get the very best advice.

You can find dozens of experts online and learn more about their work via our How to Disaster Podcast and the recordings from our annual [Wildfire Leadership Summit](#).

Maui is in a unique position to recover, rebuild, and reimagine Lahaina exactly as the community wants – something we have never seen to this degree. The people of Maui are already successful in changing systems, whether or not it is apparent right now. We anticipate decades more of megafire disasters, causing significant damage and trauma to communities. What is implemented here and in adaptable ways can and will influence the rebuilt landscape for many others.

Ask for what you want. Share what you know. Codify what you learn along the way.

Respectfully submitted,

Jennifer Gray Thompson, MPA

CEO, After the Fire USA

CITATIONS

FIRE SUMMARY

- (1) Maui wildfires of 2023 | Causes, Damage, Death, & Facts. <https://www.britannica.com/event/Maui-wildfires-of-2023>.
- (2) Hawaii fire: Maui police report that the death toll hits 100 in Lahaina wildfire. <https://www.msn.com/en-us/weather/topstories/hawaii-fire-maui-police-report-death-toll-hits-100-in-lahaina-wildfire/ar-AA1k3q9H>.
- (3) Hawaii fire: Maps and before and after images reveal Maui ... - BBC. <https://www.bbc.com/news/world-us-canada-66465570>.
- (4) Maui accepts donated fire engines to help fill a gap in equipment after the August wildfires. <https://mauiNOW.com/2023/11/10/maui-accepts-donated-fire-engine-to-help-fill-a-gap-in-equipment-after-the-august-wildfires/>.
- (5) Maui's Shorthanded And Underpaid 911 Dispatchers Improvised During Lahaina Fire. <https://www.civilbeat.org/2023/11/mauis-shorthanded-and-underpaid-911-dispatchers-improvised-during-lahaina-fire/>.
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