



BERKELEY

# Resilience Strategy

A plan to advance preparedness and equity in Berkeley, a community known for inclusiveness and innovation



**“Berkeley is transforming resilience from concept into action. The Resilience Strategy provides an invaluable roadmap for Berkeley to adapt and thrive in response to the formidable challenges of the 21st century.”**

—Tom Bates, Mayor, City of Berkeley

*View from the Berkeley Hills onto Berkeley, Oakland, and the San Francisco Bay.*

# Letter from the City Manager

Dear Friends,

Berkeley is a relatively small city, but our world class academic institutions, reputation for tolerance and inclusiveness, delicious local food, and access to the broader San Francisco Bay Area draw residents and visitors from around the world. The strength and texture of our city, and what makes it unique, is the people—the innovators, artists, activists, students, public servants, and families—young and old, who call Berkeley home. Our community’s resilience rests on our people and our ability to live well in good times and bounce back stronger than ever from the inevitable hard times.

Developed with input and insights from the people of Berkeley, the Resilience Strategy is designed to articulate solutions that make our city more resilient not only to physical challenges, such as earthquakes, sea level rise, and aging infrastructure, but also to social challenges, such as racial inequity. At its core, the Resilience Strategy is about building resilience by building community. Strong connections between neighbors and lasting partnerships between community-serving organizations are vital to helping all residents, especially those most in need and historically underserved, to thrive.

Berkeley’s Resilience Strategy is the launch point for several programs that foster these connections and partnerships. One of these programs that I am excited about is the new Community Resilience Center Program, which will enable several community-based organizations, in partnership with the City, to serve as hosts for training and conduits to disaster preparedness, public health, and other services that are tailored to the needs of the people the organizations serve. This program is a good example of what the practice of resilience looks like—it addresses more than one challenge at once and creates multiple benefits for many people.

I am proud of the many partnerships that have made the Resilience Strategy possible, and I look forward to forming many additional partnerships that will enable its implementation. 100 Resilient Cities

(100RC)—Pioneered by The Rockefeller Foundation—has provided invaluable support, guidance, and access to technical assistance. Our neighboring cities—Oakland and San Francisco—are also participating in 100RC, and continued collaboration in the region will help to amplify our work beyond the boundaries of our respective cities.

Most of all, I am grateful to the Berkeley community for contributing to the Resilience Strategy and for what you do every day to make Berkeley the active, dynamic, and highly engaged community that it is. I invite all community members to review this report with an eye towards how you can join your friends, neighbors, and colleagues in making Berkeley a model of city resilience.

Sincerely,



Dee Williams-Ridley  
City Manager



*City Manager Dee Williams-Ridley standing next to the Peace Bell at Berkeley City Hall*



Berkeley Marina



Photo Credits: Berkeley Marina, AECOM, (in Hong Kong), left to right, Market, 4tes2mouth, Shorlins, AECOM, City Hall, AECOM, Berkeley NAACP meeting, Rashied Shabazz/Oakland Post, Goodmices Greek, Pimpinellus, Jupiter, Restaurant, Joe Parks, West St, Bikeway, Dianne Yee

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# Introduction and Purpose

In 2014 the City of Berkeley (City), along with our neighboring cities of Oakland and San Francisco, was one of the first 32 cities selected to participate in 100 Resilient Cities (100RC)—Pioneered by The Rockefeller Foundation. 100RC helps cities around the world build resilience to the social, economic, and physical challenges of the 21st century.

A city's resilience is defined by the ability of the individuals, institutions, businesses, and systems within the community to survive, adapt, and grow no matter what chronic stress or acute shock it experiences. A resilient city lives well in good times and bounces back quickly and strongly from hard times.

The City conducted extensive research that included community outreach and engagement to develop a strategy that is designed to advance Berkeley's resilience. Building on existing efforts and with guidance from the Mayor, the City Council, and the community, the Berkeley Resilience Strategy identifies six long-term goals and recommends specific short-term actions to help address some of Berkeley's most pressing challenges.

## Berkeley's Interconnected Resilience Challenges

### Earthquakes

As residents of Berkeley and the Bay Area region well know, one of the most pressing challenges we face is natural disasters. Given our proximity to several faults, including the Hayward Fault, which runs directly through the city, Berkeley is particularly vulnerable to earthquakes. Current Berkeley residents are likely to experience a major earthquake in their lifetime. In the event of a major earthquake, over 600 housing units would be destroyed and 20,000 more would be damaged. Approximately 3,000

to 12,000 households would be displaced. Low-income housing units are expected to be damaged at the highest rate. Businesses would also be destroyed. And the energy and water infrastructure of the various utilities would likely be disrupted for several days or weeks. The economic impact in Berkeley would be in the billions of dollars, and much more in the region as whole. Every aspect of the city, including its people, historic places, and economic prosperity, could be quickly and dramatically altered.

### Wildfires

Berkeley and the East Bay have a history of destructive wildfire in the eastern hills. The wildfire risk in the hills is compounded by the area's narrow streets, which limit access and egress routes. This risk was clearly demonstrated in the 1991 Tunnel Fire, which destroyed entire neighborhoods in Berkeley and Oakland and took the lives of 25 people. In 1923, an even bigger fire burned through Berkeley, destroying nearly 600 structures. If a fire burned that same area today, approximately 3,000 structures would be destroyed, including many small businesses, single-family homes, and apartment buildings, particularly buildings that house university students. The risk of wildfire is aggravated by California's severe and prolonged drought.

### Climate Change Impacts: Drought and Flooding

Due to climate change, longer periods of drought are expected to be the new normal for our city, region, and state. This Resilience Strategy was developed in the midst of one of the most severe, multi-year droughts in the state's history. In addition to increased wildfire risk, the impacts of drought include higher food prices and significant stress on Berkeley's urban forest and ecosystems.

## INTRODUCTION AND PURPOSE

On the other end of the spectrum, climate change is also causing more frequent and severe flooding, especially in West Berkeley, which is the part of the city closest to the San Francisco Bay shoreline. Bay water levels are rising and are projected to continue to increase at an accelerating rate throughout the 21st century. In combination with more unpredictable and extreme rain events, sea level rise is exacerbating the limits of Berkeley's aging stormwater system, which is degrading due to decades of deferred maintenance and repair and is under-capacity for today's changed climate.

### Racial Inequity

In addition to physical challenges, Berkeley also faces chronic social challenges. For example, racial inequity exists in health outcomes, income, and educational attainment. Compared to White residents, African American residents in Berkeley are three times less likely to have a college degree and two times more likely to live in poverty. African American residents in South and West Berkeley have higher rates of childhood asthma hospitalizations, heart disease, high blood pressure, stroke, and diabetes. Inequity correlates with greater vulnerability to physical challenges, making many in Berkeley disproportionately at risk from natural disasters and the impacts of climate change.

### Building Berkeley's Resilience through Connectedness

Clearly, these are massive and complex challenges that no one strategy can solve. But development and implementation of the Resilience Strategy is an opportunity to identify tangible steps that contribute to a solution and that emphasize an approach to resilience-building that can be further applied by the City and its community partners to other challenges moving forward. **The approach that this Strategy emphasizes is to build community resilience by building stronger connections—stronger connections between neighbors; between public, private, nonprofit, and academic institutions; between departments within the City government; and between Bay Area local**

**and regional governments.** These connections not only can provide critical support and lifelines in the event of a disaster, but also lead to multi-stakeholder, multi-benefit problem solving even under normal circumstances.



Goal 1: Build a Connected and Prepared Community



Goal 2: Accelerate Access to Reliable and Clean Energy



Goal 3: Adapt to the Changing Climate



Goal 4: Advance Racial Equity



Goal 5: Excel at Working Together within City Government to Better Serve the Community



Goal 6: Build Regional Resilience

In the spirit of connectedness, the Resilience Strategy is also an invitation for all residents and organizations in the city to partner with the City government and other community leaders to build Berkeley's resilience together. There is no single action we can take that solves all of Berkeley's challenges, but we can take coordinated, multi-disciplinary steps that address more than one challenge at once. As you review the goals and actions articulated in this report, we invite you to identify opportunities for you to benefit from and contribute to the work. We have specifically included "What you can do" sections throughout the document to stimulate some ideas.



Moving forward, the City will continue to contribute to and learn from the practice of resilience that is being advanced through the 100RC Network, of which Berkeley is honored to be a part. The City will continue to foster partnerships with resilience leaders in the region, including the Cities of Oakland and San Francisco and the multitude of local resilience champions in our community.



The City of Berkeley partners with the **Berkeley Path Wanderers Association** to build and maintain walking paths in the eastern hills to assist with firefighting and evacuation efforts as well as for recreation. The Berkeley Path Wanderers Association is dedicated to the creation, preservation and restoration of public paths, steps and walkways in Berkeley. More information at <http://berkeleypaths.org/>.

## What you can do

The Resilience Strategy is a product of the Berkeley community, and its successful implementation rests on community action. Look for the “What you can do” boxes with the honeycomb background throughout this document for actions you can take today. Links to more information and ideas are also provided.

## Berkeley Ready – Be Connected. Be prepared. Be Berkeley. (The reason for the honeycomb)



Several actions identified in the Resilience Strategy are designed to improve access to disaster preparedness services and assistance, especially for residents that have been historically underserved. As part of these efforts, the City developed a new “Berkeley Ready” brand for its disaster preparedness programs. The honeycomb

pattern in the new brand is meant to convey themes that we associate with bees in a hive-connectedness and working together for a shared purpose. These are qualities that are fundamental to our community’s preparedness and resilience. The City will integrate the Berkeley Ready brand throughout its website and outreach.

(Be)rkeley Ready.  
Be connected.  
Be prepared.  
Be Berkeley.





View of the Berkeley Hills

Photo Credits: Berkeley Hills, AECOM; (in honeycomb b left to right): Adventure Playground, Mammoth Junction, Redwoods, Molly Samuel/KOED, Berkeley, Jim Arnold/Solar Array on Comp Shingle Roof, Solar City; Greek Theatre, Daniel Parks; Berkeley High School, AECOM; Chaz Panisse, AECOM

# Developing the Strategy

Development and implementation of the Berkeley Resilience Strategy are opportunities for the City of Berkeley government (City) and partners in the community to research and articulate some of Berkeley's most pressing resilience challenges; identify specific, multi-benefit actions that contribute to solutions to those challenges; and secure additional resources, technical assistance, and partnerships to accelerate next steps.

The goals and actions identified in the Resilience Strategy are grounded in community input, expert analysis, and best practices from other cities in the global 100 Resilient Cities Network. Approximately 1,100 community

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## **Approximately 1,100 community members contributed their insights and ideas to this Strategy**

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members contributed their insights and ideas through a combination of an online survey; public workshops; City Council meetings; City Commission meetings; and events hosted by community-based organizations, such as the Berkeley Climate Action Coalition.

Partner institutions and agencies, such as the University of California

(UC), Berkeley; Lawrence Berkeley National Laboratory (LBNL); the Association of Bay Area Governments (ABAG); the San Francisco Bay Conservation and Development Commission (BCDC); and the Government Alliance on Race and Equity provided invaluable guidance.

The following research, outreach, and analysis we conducted informed the goals and specific actions identified in the Resilience Strategy.

- **Conducting seismic evaluations, economic risk analysis, and energy and water audits of six City care and shelter facilities.**

- **Evaluating and documenting gaps in the emergency backup power infrastructure for critical City facilities and researching national best practices in advancing energy reliability.**
- **Evaluating the efficacy of existing City disaster preparedness incentive programs.**
- **Analyzing how sea level rise and changing precipitation trends increase flooding and affect Berkeley neighborhoods and infrastructure.**
- **Identifying and evaluating potential additional stormwater management funding and financing options.**
- **Analyzing options for diversifying the city's water supply in the face of severe drought.**
- **Participating in an international exchange hosted by the City of Rotterdam, the Netherlands, focused on learning from the world's leading experts on floodwater management.**
- **Participating in a year-long, action-oriented training focused on identifying and eliminating institutional barriers to racial equity.**
- **Collaborating with regional agencies, the Cities of Oakland and San Francisco, and others to identify regional resilience-building approaches.**
- **Providing a diverse set of opportunities for community members to share input.**

All of this work was conducted with the objective of building or improving connections between individuals and between organizations

## DEVELOPING THE STRATEGY



*The City of Berkeley participated in an international exchange hosted by the City of Rotterdam and 100RC, which focused on learning from the world's leading experts on floodwater management. More information at: <http://rdcrotterdam.com/news/first-100-rc-international-water-exchange-work-shops/>  
Photo Credit: Roel Dijkstra Fotografie*

within the community and region and identifying the multi-benefit, multi-stakeholder actions that are articulated in the Resilience Strategy.

A helpful guide throughout the process was the City Resilience Framework (CRF). Developed by Arup with support from The Rockefeller Foundation, the CRF is being used by cities in the 100RC Network to guide a common understanding of and approach to the practice of building city resilience. It was drafted from extensive empirical research conducted globally and is based on four dimensions identified as being essential to urban resilience: Health and Well-being, Economy and Society, Infrastructure and Environment, and Leadership and Strategy. Each of the dimensions is further defined by three drivers of resilience.

For Berkeley, the CRF has proved to be a useful tool for identifying actions that have “resilience value,” meaning that they integrate multiple interests and areas of expertise, address multiple challenges, and create several co-benefits. As you review the goals in the pages that follow, note the **“resilience value”** associated with each.

## Building the Bay Area’s Resilience

**In 2014, the Cities of Berkeley, Oakland, and San Francisco were three of the first 32 cities selected by The Rockefeller Foundation to participate in 100RC.**

**The three cities are unique in many ways, but they also share many of the same resilience challenges, including natural disasters, the impacts of climate change, aging public infrastructure, and racial inequity. Together, these cities—along with regional agencies, other Bay Area local governments, and many private, public, and non-profit partners—are working to address these challenges at a regional level. Participation in 100RC has provided additional momentum to this work.**

**For example, the three cities are contributing to the launch of an urban design challenge. Based on the work of Rebuild by Design, this design competition is a visionary opportunity to make the region more resilient to sea level rise, storm surge, urban flooding, and seismic events. In partnership with ABAG, the three cities are also working to advance coordination between utilities and other lifeline agencies through formation of a Regional Lifelines Council. Learn more about these and other regional efforts in Goal #6: Build Regional Resilience, later in this document.**

PIONEERED BY THE ROCKEFELLER FOUNDATION

100 RESILIENT CITIES

100RC City Resilience Framework:

100 Resilient Cities—Pioneered by The Rockefeller Foundation, helps cities around the world become more resilient to the physical, social, and economic challenges that are a growing part of the 21st century. 100RC provides this assistance through funding for a Chief Resilience Officer in each member city to lead resilience efforts; resources for developing a resilience strategy; membership in a global network of peer cities to share best practices and challenges; and access to a variety of resilience tools, including the City Resilience Framework. Berkeley was one of the first members of 100RC.



What is Resilience?

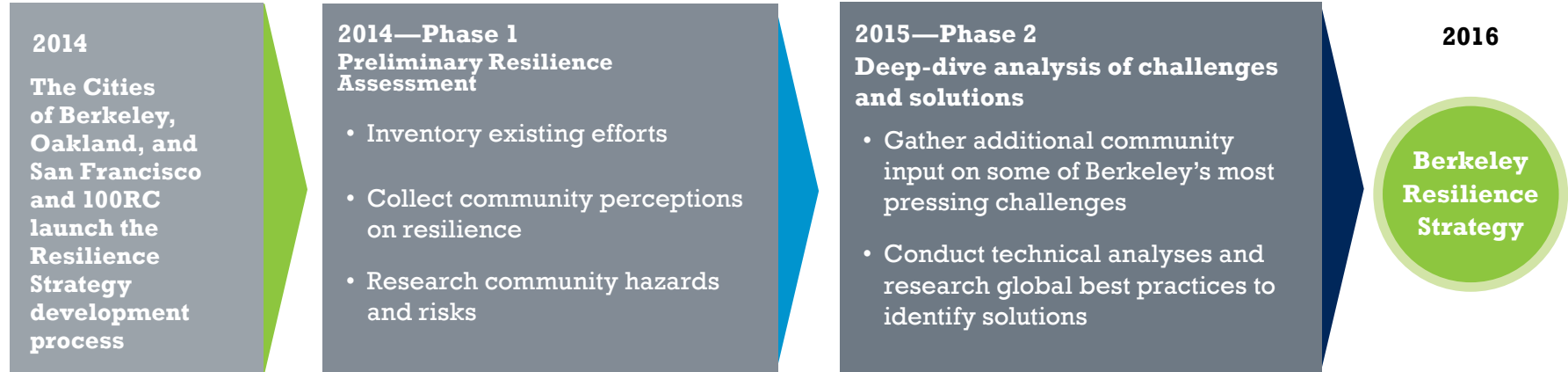
Urban resilience is the capacity of individuals, communities, institutions, businesses, and systems within a city to survive, adapt, and grow no matter what kinds of chronic stresses and acute shocks they experience.

**CHRONIC STRESSES** weaken the fabric of a city on a day-to-day or cyclical basis. (Examples include: high unemployment, inefficient public transportation systems, endemic violence, and chronic food and water shortages.)

**ACUTE SHOCKS** are sudden, sharp events that threaten a city. (Examples include: earthquakes, floods, disease outbreaks, and terrorist attacks.)

## DEVELOPING THE STRATEGY

### Berkeley Resilience Strategy Development Timeline

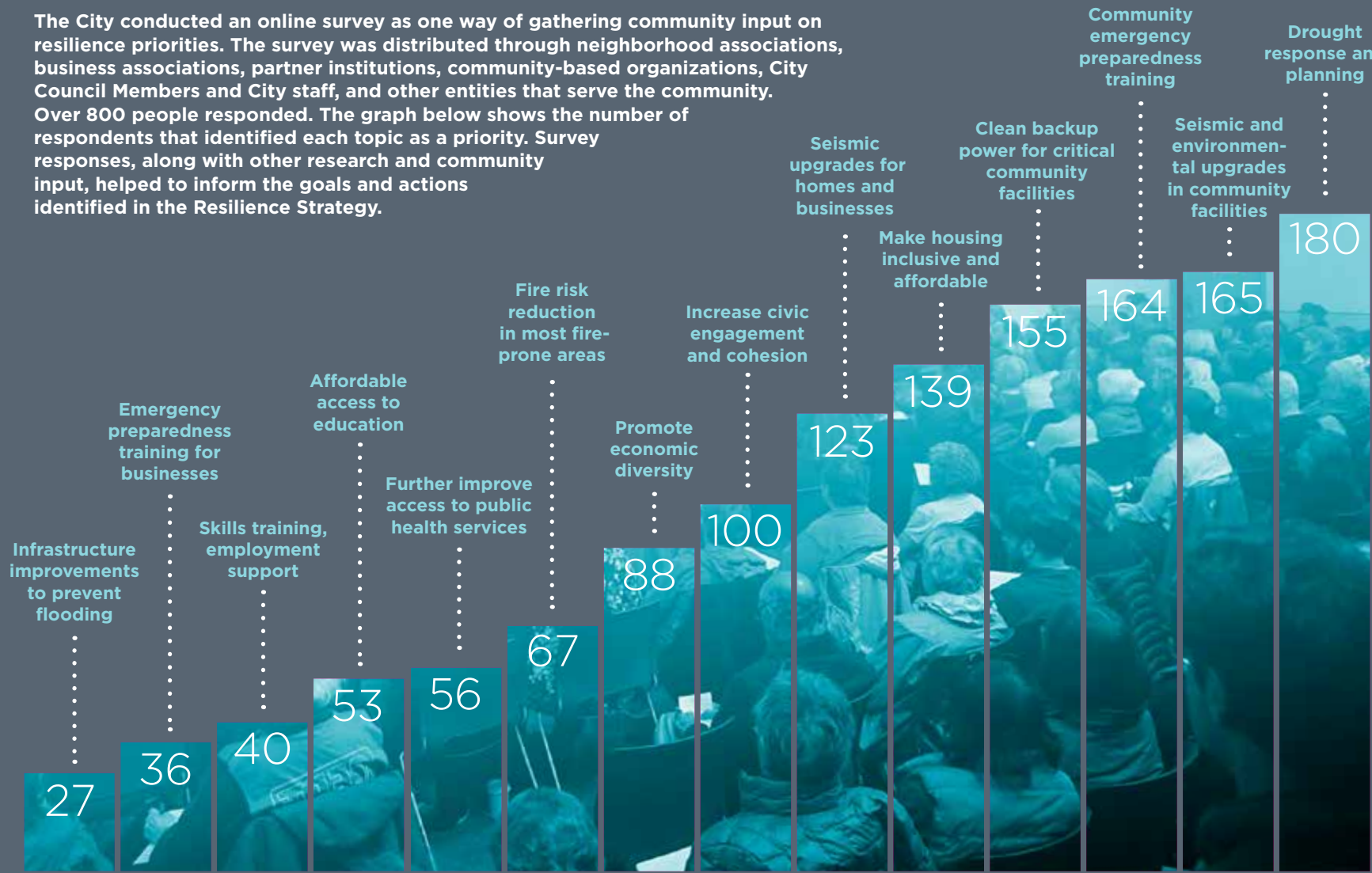


Over 200 community members participated in a December 2015 workshop to learn about El Niño conditions and flood preparedness, and to contribute to the Berkeley Resilience Strategy. The workshop was hosted by the City of Berkeley and Berkeley Unified School District.  
Photo Credit: BUSD



## Gathering Public Input on Berkeley's Resilience Priorities

The City conducted an online survey as one way of gathering community input on resilience priorities. The survey was distributed through neighborhood associations, business associations, partner institutions, community-based organizations, City Council Members and City staff, and other entities that serve the community. Over 800 people responded. The graph below shows the number of respondents that identified each topic as a priority. Survey responses, along with other research and community input, helped to inform the goals and actions identified in the Resilience Strategy.



# Building Berkeley's Resilience

The Berkeley Resilience Strategy is designed to advance community preparedness for some of Berkeley's most pressing physical, social, and economic challenges, examples of which are included in this timeline. The Resilience Strategy builds on and dovetails with past

planning efforts that benefited from expert analysis and broad community engagement. Moving forward, successful Strategy implementation rests on continued community engagement and new partnerships that build Berkeley's resilience.




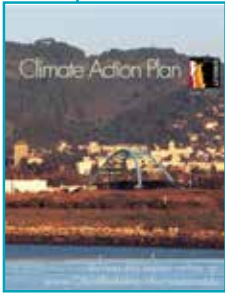



2004	2005	2006	2007	2008	2009	2010	2011
 <p><b>2004: Disaster Mitigation Plan</b> A plan to evaluate the risks that a range of hazards pose to Berkeley and identify actions to minimize those risks</p>	 <p><b>2005: Berkeley Hills Fire Assessments</b> House-to-house risk assessments were conducted in the Berkeley Hills through a FEMA grant to provide information to residents and vital improvements to fire evacuation pathways</p>	<p><b>2006: Measure G Passed</b> Berkeley voters passed a measure setting a target of reducing community-wide greenhouse gas emissions by 80% below 2000 levels by 2050 and directing the Mayor to develop a Climate Action Plan to achieve that target</p>	 <p><b>2008: Measure GG Passed</b> Berkeley voters approved a special tax to maintain fire station staffing and improve emergency medical response and disaster preparedness services</p> <p><b>2008: 2020 Vision for Berkeley's Children and Youth</b> The City of Berkeley, Berkeley Unified School District, and other partners launched an initiative designed to, by 2020, end the racial predictability of academic achievement that exists in Berkeley public schools</p>	 <p><b>2009: Climate Action Plan</b> A plan developed through extensive community input and designed to achieve deep reductions in Berkeley's greenhouse gas emissions along with other co-benefits</p>	 <p><b>2011: Watershed Management Plan</b> A plan that articulates an integrated strategy for managing urban water resources, including through advancement of green infrastructure</p>		
 <p><b>1991: Tunnel Fire</b> The fire destroyed entire neighborhoods in Berkeley and Oakland and took the lives of 25 people. The City has since worked to reduce wildfire vulnerability, including through improved building codes, vegetation management, and coordinated training with other area fire personnel</p>		 <p><b>2007: Cosco Busan Oil Spill</b> A container ship hit the Bay Bridge, spilling over 53,000 gallons of fuel oil into the San Francisco Bay and causing harm to ecosystems, including along the Berkeley coastline</p>					

Photo Credits: Tunnel Fire, Richard Misrachi; Cosco Buscan spill, Patty Donald; Be Prepared, City of Berkeley; Car at Almaden Reservoir, Santa Clara, Michael Short; Rim Fire, Brian Hickey/KCRA; Earthquake, Lisa James/Napa Valley Register; Soft Story Program, City of Berkeley website; Ashby underpass flooding, Paul Chinn/SF Chronicle; Green Infrastructure at Alston Way, AECOM





### 2013: Rim Fire Destroys Tuolumne Camp

The Rim Fire, one of the largest and most damaging wildfires in California's history, destroyed the City of Berkeley-run Tuolumne Family Camp near Yosemite. The camp has been treasured by Berkeley families since 1922. It will be rebuilt



### 2014: Napa Earthquake (M 6.0)

A magnitude 6.0 earthquake jolted Napa, less than an hour's drive from Berkeley, providing another reminder of the need to prepare for sudden shocks

2012

2013

2014

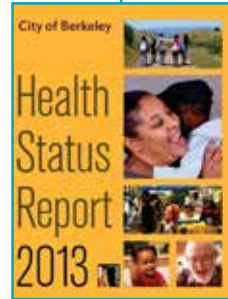
2015

2016



#### 2012: Downtown Area Plan

A plan providing guidelines for future development in Downtown Berkeley in order to promote economic development, housing and community health, historic preservation, sustainability, and open space

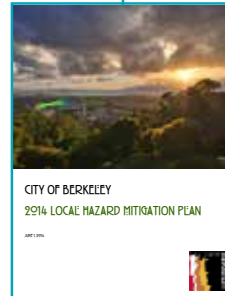


#### 2013: Health Status Report

A report that analyzes the health of the Berkeley community throughout the life course, from pregnancy and childbirth through childhood, adolescence, adulthood, and death. The report identifies health inequities based on patterns of geography, race/ethnicity, and income and education

**2013: 100 Resilient Cities Selection** Berkeley, Oakland and San Francisco are part of the first group of cities selected by The Rockefeller Foundation to participate in 100 Resilient Cities

**2013: Soft Story Program** The City passed a law requiring owners of soft, weak, or open front buildings with five or more dwelling units to conduct seismic retrofits



#### 2014: Local Hazard Mitigation Plan

The Plan provides an updated assessment of Berkeley's main hazards of concern and, through extensive community input, identifies the most important steps that the City and its partners can pursue to reduce risk and advance preparedness

**2014: Measure D Passed** Berkeley voters become the first to pass a city sugar-sweetened beverage tax

**2014: Measure M Passed** Voters approved a bond for street paving and installation of multi-benefit green infrastructure projects throughout the city

#### 2014: Black Lives Matter Protests

In response to police killings in Ferguson, Missouri and New York City, thousands hit the Berkeley streets in protest over 11 days in December. The Berkeley Police Department, with input from the community, completed an extensive review of its response in order to document lessons learned and to continuously improve strategies for facilitating safe and peaceful protest



#### 2012: Start of severe California drought

California is in the midst of a prolonged, multi-year drought, which aggravates wildfire risk and has significant impacts on agriculture and ecosystems. The City of Berkeley reduced water consumption in municipal operations by over 40% between 2013 and 2015



#### 2014: Flooding

Large rain storms in December caused significant flooding of schools, homes, and streets

#### 2016: Exterior Elevated Elements (E3) Inspection Program

As a result of a tragic balcony collapse in Downtown Berkeley that killed 6 students and injured 13, the City passed an ordinance requiring inspection and certification of weather-exposed elevated elements every 3 years to ensure such a tragedy never occurs again



#### 2016: Berkeley Resilience Strategy

**“Berkeley has set the bar high for inclusive, forward-thinking resilience building efforts. The City’s work to develop their Resilience Strategy, and forthcoming work to implement innovative solutions and actions, will continue to serve as an example to other cities and communities not just in the Bay Area, but across the world.”**

—Michael Berkowitz, President, 100RC

# Berkeley's Resilience Goals



**GOAL 1**

**Build a Connected and Prepared Community**

Improve the ability of all community members to prepare for, respond to, and recover from natural disasters.



**GOAL 2**

**Accelerate Access to Reliable and Clean Energy**

Increase Berkeley's energy assurance and reduce greenhouse gas emissions by decentralizing and greening the energy we consume.



**GOAL 3**

**Adapt to the Changing Climate**

Embrace and implement innovative, multi-benefit natural resource management, urban planning, and infrastructure design solutions.



**GOAL 4**

**Advance Racial Equity**

Provide proactive leadership to identify and eliminate institutional barriers to racial equity.



**GOAL 5**

**Excel at Working Together within City Government to Better Serve the Community**

Develop integrated solutions to solve big challenges and improve access to services and information for the community.



**GOAL 6**

**Build Regional Resilience**

Work with other Bay Area cities to develop actionable strategies that match the scale of the social, economic and physical challenges faced by the region.



## Goal 1

# Build a Connected and Prepared Community





Berkeley is a truly unique community. Its world class academic institutions, well-earned reputation for tolerance and inclusiveness, vibrant local economy, and access to the broader San Francisco Bay Area draw residents and visitors from all over the world. But every aspect of the city, including its people, historic places, and economic prosperity, could be quickly and dramatically altered by a catastrophic disaster, such as an earthquake or wildfire. Although we cannot predict when the next disaster will strike, as a community we are empowered to take steps now to reduce the harm disasters can cause.

Fundamental to preparedness is connectedness. The City of Berkeley government (City) and its community partners have worked for many years to provide incentives and support that advance critical connections among neighbors; between public, private, non-profit, and academic institutions; and between Bay Area local and regional governments. These connections enable everyone in the Berkeley community to take part in a coordinated response and recovery effort. Importantly, these connections also help to ensure that Berkeley's most vulnerable residents have vital lifelines before, during, and after a disaster.

Through the dedication and relentless focus on disaster readiness that many in our community provide, Berkeley is safer and more prepared now than ever before. But our work is not done. The actions identified below are designed to build on existing efforts and to result not only in improved physical safety, but also a more tightly-knit community.

### Resilience value

The actions identified to build a connected and prepared community are designed to result in multiple benefits, including improved physical safety, which will result in reduced loss of life and injury in the event of a disaster; increased social cohesion; increased access to services and assistance for historically underserved residents; improved environmental performance of critical City facilities; and improved ability to minimize economic disruption.

### What you can do

#### Actions you can take to help build a connected and prepared community include:

- **Get to know your neighbors, especially those that may need extra assistance in the event of a disaster. Organize a block party and invite Berkeley Ready staff to provide information on critical steps you and your family can take to prepare for emergencies. Visit <http://cityofberkeley.info/OES> to learn more.**
- **Get trained. Invite your friends and neighbors to join you in taking a Community Emergency Response Training (CERT) class. Visit <http://cityofberkeley.info/cert/>.**
- **Take advantage of incentives to get connected and prepared. For example, the City offers free garbage-hauling services for bulky waste by providing a free dumpster for the weekend to neighborhood groups that have worked together to prepare for a disaster. Visit <http://cityofberkeley.info/Dumpster/>.**
- **Learn how to find useful information to keep you and your loved ones safe during an emergency and sign up for alerting systems by visiting <http://cityofberkeley.info/emergencyalerting>.**



## GOAL 1 | BUILD A CONNECTED AND PREPARED COMMUNITY

### 1A. Create safe (and green) City community centers and care and shelter facilities

The City has designated seven community and senior centers as care and shelter sites in the event of a disaster. These facilities, depending on the scale and nature of the event, could provide overnight sheltering, food distribution, and other services to those in need. These facilities are distributed throughout the city and, in addition to their care and shelter function, provide essential services on a daily basis to thousands of Berkeley residents, including seniors and youth, who use these facilities for hot meals, recreation, classes, and socializing.

The facilities are critical to our community, but they are also in critical condition. The conclusion of the seismic evaluations conducted in 2015 is that, in the event of a major earthquake, none of these seven facilities would be able to serve its daily or disaster functions without significant and costly repairs. An analysis by Risk Management Solutions (RMS) demonstrated that it is significantly more cost-effective to invest in seismic upgrades than it is to rebuild or repair structures after an earthquake. The City also conducted energy and water audits of the facilities and identified cost-effective energy- and water-saving opportunities.

The City will work with community partners and technical assistance providers to make multi-benefit seismic, energy, water, and operational upgrades to these critical community-serving facilities.

#### 1A

**Action lead(s):** City of Berkeley City Manager’s Office; Departments of Public Works; Parks, Recreation and Waterfront; Health, Housing and Community Services; and the Office of Emergency Services

**Partner(s):** RMS

**Launch timeline:** The James Kenney Community Center, which serves as a care and shelter site, will undergo a seismic retrofit in 2016. The City is working with community partners to identify funding to upgrade the other six care and shelter facilities.

### 1B. Launch the Community Resilience Center Program

Recognizing the need to connect more residents with disaster preparedness, public health, climate action, and other services, the City is partnering with several community-based organizations in Berkeley to launch the Community Resilience Center (CRC) Program. Through the CRC Program, the City will provide free disaster supply “caches” and disaster planning assistance to community-based organizations, such as churches and other faith-based groups, youth-empowerment organizations, cultural centers, large apartment buildings, and social services providers. These community-based organizations will be designated as CRCs and will serve as hosts for training and conduits to information and support that is tailored to the needs of the people the organizations serve. The City is prioritizing partnerships with organizations that

assist people who are historically underserved. Initial CRCs will include (among others) Harriet Tubman Terrace, which is an apartment complex that rents to low-income seniors and people with disabilities; the Ed Roberts Campus, which is dedicated to disability rights and universal access; and La Peña Cultural Center, which promotes social justice, arts participation, and intercultural understanding.

#### 1B

**Action lead(s):** City of Berkeley Office of Emergency Services, Public Health Division, and City Manager’s Office

**Partner(s):** Initial CRCs include Berkeley Youth Alternatives, Ed Roberts Campus, Harriet Tubman Terrace, La Peña Cultural Center, Head Start, and McGee Baptist Church

**Launch timeline:** 2016

### 1C. Foster neighbor-to-neighbor connections to advance disaster readiness

Following Berkeley’s next major disaster, such as an earthquake or wildfire, government resources and assistance may not be available for several days. It is therefore essential that neighbors are connected to and can support each other before and after such an event. Neighbor-to-neighbor connections are especially important for socially isolated seniors and residents with disabilities.



In partnership with the non-profit Berkeley Disaster Preparedness Neighborhood Network and local community leaders, the City is fostering neighborhood-level connections by identifying Neighborhood Disaster Preparedness Liaisons. The Liaisons will serve as local leaders and organizers within a neighborhood and can act as conduits for nearby residents to training, information, and other support provided by the City government and other organizations.

During Resilience Strategy development, some residents expressed frustration about the challenge of learning about and connecting with the disaster preparedness leaders and efforts already active in their neighborhood. The City is currently researching the best ways to connect residents with existing neighborhood leaders and activities. The City is researching similar efforts in other cities and will conduct a survey of Berkeley residents to help identify next steps.

**1C**

**Action lead(s):** City of Berkeley  
Office of Emergency Services  
and City Manager’s Office

**Partner(s):** Berkeley Disaster  
Preparedness Neighborhood Network

**Launch timeline:** 2016

**1D. Maximize the City’s ability to secure Federal disaster recovery funding**

Natural disasters could devastate large areas of Berkeley, wreaking economic havoc. Following declared disasters, the Federal Emergency Management Agency (FEMA) Public Assistance (PA) Program provides affected jurisdictions with financial assistance to help with recovery. This assistance requires compliance with extremely complex regulations. Lack of compliance can result in denial of funding or in the City having to return funding to the Federal government years after recovery project completion.

The City is undergoing a comprehensive effort to maximize Berkeley’s ability to receive and retain funding from the FEMA PA Program. This effort to develop Berkeley’s disaster cost recovery capability includes creation of a comprehensive Disaster Cost Recovery Strategic Plan and associated staff training for the City to ensure that its plans and policies are fully compliant with Federal regulations in advance of our next catastrophe. In the event of a disaster, these steps are expected to form the foundation of Berkeley’s recovery and to save the City hundreds of millions of dollars.

**1D**

**Action lead(s):** City of Berkeley  
Office of Emergency Services  
and City Manager’s Office

**Launch timeline:** 2016

**1E. Prepare for Wildfires in the Berkeley Hills**

Berkeley and the East Bay area have a history of destructive fires in the area’s wildland-urban interface. In 1923, a fire that started in Wildcat Canyon, northeast of the city, was swept by wind into residential areas of North Berkeley, where it destroyed nearly 600 structures. More recently, the 1991 Tunnel Fire in the Oakland/Berkeley Hills destroyed entire neighborhoods in both cities, and 25 people lost their lives. The estimated damage from the 1991 fire was approximately \$1.5 billion.

Since the Tunnel Fire, the City has reduced its wildfire vulnerability through improved building codes, aggressive vegetation management, and fire training and response partnerships with other area fire departments to keep firefighters ready to respond together. The City also partners with the Berkeley Path Wanderers Association to build and maintain walking paths to assist with evacuation and firefighting efforts in the Berkeley Hills.

Despite the City’s progress, the risk of a wind-driven wildfire in the hills that could transition into a fast-moving urban firestorm in the flatlands continues. The City will build on existing readiness efforts by developing a robust wildfire evacuation traffic control plan for the Berkeley Hills. The plan will include consideration of the area’s unique geography and transportation challenges and establish evacuation zones, routes, and necessary staffing and communication protocols to manage the flow of people. Once this plan is established, the City will work with the Berkeley Path Wanderers



## GOAL 1 | BUILD A CONNECTED AND PREPARED COMMUNITY

Association and neighborhood groups to ensure that area residents are aware of the best evacuation routes from their homes—whether by car or on foot.

### 1E

**Action lead(s):** City of Berkeley Fire and Police Departments

**Partner(s):** Berkeley Path Wanderers Association, neighborhood associations, and neighboring cities

**Launch timeline:** 2016 (ongoing)



*San Francisco Chronicle Newspaper headline about the 1991 Tunnel Fire.*

### 1F. Continue to improve the seismic safety of Berkeley’s most vulnerable apartment buildings

In the wake of the 1994 Northridge earthquake, the City identified hundreds of wood-frame apartment buildings with weak first stories, described as a soft, weak, or open-front condition. These weak first stories make the structures—and the thousands of residents housed in them, many of whom are low-income—extremely vulnerable to earthquakes. Since that time, the City has catalyzed seismic retrofits in over half of those buildings using incentive programs, City ordinances, inspections, and other tools.

In 2013, the City Council passed a law requiring owners of the remaining vulnerable, “soft story” buildings to retrofit those structures. Owners of soft story properties with five or more dwelling units must apply for a building permit by the end of 2016 and complete the work by December 31, 2018.

The City works to remove the financial barriers to compliance by providing a transfer tax rebate to lower the cost of seismic retrofits and access to Property Assessed Clean Energy (PACE) financing, which lets owners borrow money with no upfront cost and pay the money back at fixed rates on their property tax bill. Berkeley pioneered PACE financing in 2009 to promote solar energy. PACE has now been expanded nationwide and can be used to finance energy- and water-efficiency projects as well as seismic retrofits.

In the future, the City will continue to provide a combination of technical assistance, financial

incentives, and requirements that remove barriers to seismic (and energy) upgrades in vulnerable buildings.

### 1F

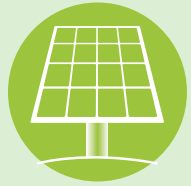
**Action lead(s):** City of Berkeley Building and Safety Division

**Launch timeline:** 2016 (ongoing)





*Berkeley CERT volunteers assemble for a training*



**Goal 2**

# **Accelerate Access to Reliable and Clean Energy**





It is easy to take for granted the energy we consume. Flip a light switch and the light turns on. Many of us have never experienced a prolonged power outage that significantly hampers our basic needs. But as was made clear by major disasters such as Hurricanes Katrina (2005) and Sandy (2012), which disrupted the power grid, loss of power and inadequate access to backup power create a cascading set of impacts that impede delivery of essential services for people in need, disrupt the economy, and hamper disaster recovery. In our city and region, earthquakes, wildfires, and other potential disasters present a similar risk.

The energy grid is also at the nexus of climate change and air pollution. Energy consumption in buildings accounts for nearly half of Berkeley's community-wide greenhouse gas emissions. These emissions are affected by both the amount and the sources of the energy we consume.

Berkeley is uniquely capable of taking action that can both advance energy reliability and reduce emissions while also keeping more dollars in the local economy and creating local jobs in the clean energy and energy services sectors. Our community has long been at the forefront of energy innovation, including pioneering a new approach to clean energy financing and adopting one of the nation's first ordinances requiring energy audits in all building types. We benefit from having two of the nation's premiere research institutions in our backyard—University of California (UC), Berkeley and Lawrence Berkeley National Laboratory (LBNL). We also benefit from our active and engaged citizens, such as those who participate in the community-led Berkeley Climate Action Coalition. Together with these and other partners, the City of Berkeley (City) is poised to take action that reduces both our vulnerability to disruption of the power grid and our impact on the environment.

### Resilience value

Through the actions identified below, the City will reduce energy costs and harmful greenhouse gas emissions while increasing green jobs, equitable access to clean energy, and the City's ability to provide critical services in the event of a disaster.

## What you can do

Actions you can take to help increase access to reliable and clean energy for your home or business include:

- **Save energy and money.** Visit <http://www.cityofberkeley.info/EnergyEfficiencyforHomes/> to learn about incentives and assistance available to increase your home's energy efficiency.
- **Go solar.** The non-profit Community Energy Services Corporation provides free, independent guidance to help you understand the solar potential of your home or business and compare contractor quotes. Visit <http://ebenergy.org/smart-solar-program/>.
- **Go electric.** City staff can provide guidance on steps to take to get an electric vehicle. Visit <http://cityofberkeley.info/evresidentialcharging/>.



## GOAL 2 | ACCELERATE ACCESS TO RELIABLE AND CLEAN ENERGY

### 2A. Develop a clean energy micro-grid network

A commonly accepted approach to providing emergency backup power is to install a diesel generator at vulnerable facilities. This relatively low-cost approach is reliable, but the benefit is narrow and has some clear downsides, including noise, air pollution, and limited capacity to provide power over the course of a prolonged outage without reliable access to diesel. These downsides make critical facilities vulnerable to disruption in the event of a disaster and are motivating the City’s pursuit of micro-grids.

Micro-grids enable a facility or group of facilities to operate autonomously when the main grid is disrupted; can be powered by clean energy sources, such as solar and backup batteries; can be used to reduce facilities’ electricity consumption during periods of peak demand, when energy prices are at their highest; and can enhance the stability of the local grid. Unlike a diesel generator, which is only used when the grid is disrupted, a clean energy micro-grid can provide environmental and economic benefits every day, year-round.

Ultimately, the City and its partners seek to develop a series of micro-grids that connect multiple public and private critical facilities into several networks. The networks would have intelligent operating systems with the ability to aggregate and share clean energy from solar and energy storage batteries across multiple facilities and to “island” the networked facilities from the main grid when power supply is disrupted. The City is pursuing funding to pilot this approach in Downtown

Berkeley and, based on the lessons learned, to replicate the model in Berkeley, the region, and beyond.

#### 2A

**Action lead(s):** City of Berkeley Office of Energy and Sustainable Development, City Manager’s Office, Department of Public Works, and Planning Department

**Partner(s):** Pacific Gas and Electric Company (PG&E), California Public Utilities Commission (CPUC), California Independent System Operator (CAISO), LBNL, and AECOM

**Launch timeline:** 2018

### 2B. Advance clean energy through “Community Choice Aggregation”

Community Choice Aggregation (CCA) programs allow cities or counties to form a not-for-profit local power agency that bundles the buying power of residents and businesses to purchase electricity. The local power agency can build or fund local clean energy projects, buy renewable energy on the market, offer energy-efficiency services and incentives to customers, and set electricity rates. The nearby counties of Marin and Sonoma have launched CCA programs. Alameda County, which Berkeley is part of, is considering launching a CCA program in 2017, and the City is actively participating in the County’s CCA Steering Committee.

CCA has several potential benefits that may help advance Berkeley’s resilience, including increased investment in local clean energy projects that could create jobs, greater local control over the energy mix used to produce electricity, and reduced greenhouse gas emissions. Under a CCA, PG&E, the investor-owned utility that serves the Bay Area, would continue to maintain the power grid, respond to outages, and send monthly bills. Customers would have an option to continue to purchase power directly from PG&E by opting out of the CCA.

#### 2B

**Action lead(s):** City of Berkeley Office of Energy and Sustainable Development

**Partner(s):** Alameda County and Berkeley Climate Action Coalition

**Launch timeline:** 2017

### 2C. Develop a Solar Action Plan to meet 50 percent of Berkeley’s power demand through solar energy by 2030

To reduce local greenhouse gas emissions, stimulate investment in the local economy, and increase energy reliability, the City is launching the development of a Solar Action Plan. The plan will build on many of Berkeley’s existing efforts to remove barriers to solar adoption, including tools such as Property Assessed Clean Energy (PACE) financing, which was pioneered in Berkeley in 2009; expedited solar permitting; and



the free solar technical assistance that is available through the local Smart Solar program. These existing efforts, in combination with State-level incentives, have catalyzed installation of approximately 1,700 solar photovoltaic systems in Berkeley between 2000 and 2015. The Solar Action Plan will prioritize opportunities to install solar for low-income households and will serve as a guide for meeting 50 percent of Berkeley's power demand through solar by 2030.

## 2C

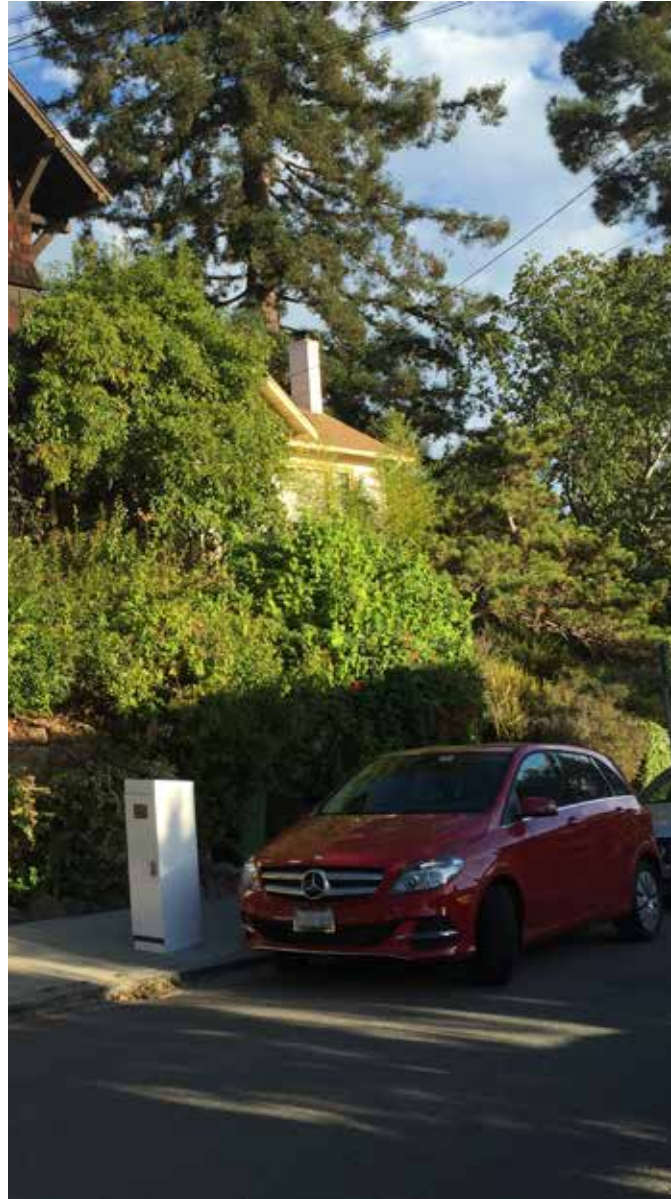
**Action lead(s):** City of Berkeley Energy Commission and Office of Energy and Sustainable Development

**Partner(s):** UC Berkeley and Community Energy Services Corporation Smart Solar Program

**Launch timeline:** 2017

## 2D. Electrify Berkeley's vehicles

Electric Vehicles (EVs) emit 70 percent fewer greenhouse gas emissions than a conventional vehicle with the current PG&E electricity portfolio and can reduce greenhouse gases even further as the City's energy becomes cleaner. Berkeley has been a leader in advancing EV adoption in the community by providing technical assistance and streamlined permitting for charging stations and by including EV charging readiness as a condition of use permits. The City has also installed several public EV charging stations and launched a Residential Curbside EV



## Berkeley's Curbside Electric Vehicle Charging Pilot Program

Homes are the most common, convenient, and economical place to charge an electric vehicle (EV). However, for Berkeley residents without a driveway, garage, or other means of off-street parking, home-charging is not an option.

The City of Berkeley is testing ways to overcome this challenge through its Residential Curbside Electric Vehicle Charging Pilot Program. Launched in 2014, the program allows participants to either create new space on their property for EV charging or to install EV charging stations at the curb by their home for use while parked on the street.

The pilot program has received significant interest from local residents and other cities that are grappling with the challenge of enabling EV adoption for more and more residents, including those without an option to park off the street.

*One of the first curbside EV charging stations to be installed in Berkeley under the Residential Curbside Electric Vehicle Charging Pilot Program. Photo Credit: Sarah Moore*



## GOAL 2 | ACCELERATE ACCESS TO RELIABLE AND CLEAN ENERGY

Charging Pilot program that offers home-charging opportunities for residents that lack off-street parking.

The number of EVs in Berkeley more than tripled in the last 2.5 years to more than 850. The City will continue to promote EVs as a solution for clean transportation for City and private vehicles and as a way to potentially increase energy reliability in critical facilities. For example, EV batteries, in combination with solar systems, can store and provide backup energy storage in the event of grid disruption.

### 2D

**Action lead(s):** City of Berkeley Office of Energy and Sustainable Development, Planning Department, and Department of Public Works

**Partner(s):** EV Coordinating Council (supported by the Bay Area Air Quality Management District (BAAQMD) and the Metropolitan Transportation Commission (MTC), Prospect Silicon Valley/Bay Area Climate Collaborative, and Governor’s Office of Planning and Research (OPR)

**Launch timeline:** 2016

### 2E. Encourage fuel switching to consume cleaner energy in all buildings

Energy use in homes, businesses, and institutions accounts for 45 percent of Berkeley’s community-wide greenhouse gas emissions; 65 percent of those emissions come from natural gas consumption, which

is used mainly for space and water heating and certain industrial processes. Achieving ambitious State and local climate action targets will ultimately require sequenced programs and policies that both make the electricity grid cleaner and transition more of our energy consumption from natural gas to electricity. This transition is critical for combatting climate change and will also stimulate investment in the local economy. The City will work with local and regional energy experts to develop a long-term fuel switching plan.

### 2E

**Action lead(s):** City of Berkeley Office of Energy and Sustainable Development, Planning Department, and Building and Safety Division

**Launch timeline:** 2019

### 2F. Launch a Climate Action Plan “Ideas Competition”

Berkeley has made significant strides in reducing its greenhouse gas emissions (by approximately 9 percent since 2000), but the City is not on track to meet its ambitious Climate Action Plan goals of reducing emissions by 33 percent below 2000 levels by 2020 and 80 percent below 2000 levels by 2050. Achieving Berkeley’s targets requires both advancing existing and planned initiatives and identifying new strategies at the State, regional, and local levels.

To identify new ideas and innovations and to foster public/private partnerships, the City is developing an “Ideas Competition.” The Ideas Competition will be designed to engage experts, entrepreneurs, and other interested stakeholders to help the City to develop additional, viable multi-benefit emissions-reduction strategies, including strategies to accelerate zero net energy buildings and fuel switching. The winning ideas will earn prizes, and the City will partner with the winners to identify next steps and resources for implementation.

With support received from the Urban Sustainability Directors Network, and in partnership with the Presidio Graduate School and staff from the Cities of Palo Alto, Santa Monica, and Aspen (Colorado), the City commenced development of the competition guidelines in 2016.

### 2F

**Action lead(s):** City of Berkeley Office of Energy and Sustainable Development and Office of Economic Development

**Partner(s):** Cities of Palo Alto, Santa Monica, and Aspen; Urban Sustainability Directors Network; and Presidio Graduate School

**Launch timeline:** 2016



*Solar panel array on the rooftop of the Zero Net Energy West Branch Berkeley Public Library*



### Goal 3

# Adapt to the Changing Climate







Berkeley and the Bay Area are already experiencing the impacts of climate change. San Francisco Bay water levels are rising and are projected to continue to do so at an accelerating rate throughout the 21st century. In combination with increasingly unpredictable and extreme rain events, sea level rise is exacerbating the limits of Berkeley's aging stormwater system. The result is more frequent and severe flooding, especially in West Berkeley.

Also driven by climate change, periods of drought are expected to grow longer and more severe throughout California. Drought has a range of cascading impacts on our community, including stressed urban forests and ecosystems, higher food prices, and increased risk of wildfire.

The consequences of flooding, drought, extreme heat, and other climate impacts are not only physical, but also social and economic. Many in the Berkeley community, based on factors such as income and the neighborhood in which they live or work, are disproportionately vulnerable.

Preparing for and adapting to the impacts of climate change require creating and activating strategies that respond to both current and future risk. Berkeley must embrace and implement innovative, multi-benefit solutions in resource management, urban planning, and infrastructure design. For example, our stormwater management infrastructure must be reimagined as a system that conveys stormwater to reduce flooding, filters it to protect our creeks and the Bay, and captures it for use or to recharge aquifers, which is especially important because we expect to experience more drought. Berkeley is already investing in green infrastructure projects that incorporate both natural and engineered elements to create benefits beyond basic flood management. The changing climate requires that we do more.

### Resilience value

The actions identified in this section will advance Berkeley's preparedness for the impacts of climate change, help residents and businesses that are most vulnerable to flooding and drought, and protect local ecosystems.

## What you can do

Actions you can take to help our community prepare for the impacts of climate change include:

- **Get involved.** The Berkeley Climate Action Coalition is a network of local community-based organizations and residents that work together to take action on climate change. The coalition works on specific projects to help our community save energy and water, increase recycling, and adapt to the changing climate. Visit <http://ecologycenter.org/climatecoalition/>.
- **Save water.** Free incentives and assistance exist to help you conserve water at home and save money on your utility bill. Visit <http://www.ebmud.com/water-and-drought/conservation-and-rebates/>.



## GOAL 3 | ADAPT TO THE CHANGING CLIMATE



*Green infrastructure is creating multiple benefits in Berkeley. Example Berkeley projects include permeable pavement in streets (above) and rain gardens within traffic circles. Berkeley community members have provided extensive input on prioritizing green infrastructure projects throughout the city.*

### 3A. Integrate multi-benefit green infrastructure into street improvement projects

Green infrastructure (GI) is one of the best examples of resilience in practice. Unlike conventional stormwater infrastructure, GI can create multiple benefits beyond flood mitigation, including protecting ecosystems by removing pollutants, beautifying a neighborhood, and, potentially, enabling the capture and use of stormwater for other purposes. Examples of GI include rain gardens, permeable pavement, and cisterns. GI projects are being implemented more and more often across Berkeley thanks to both private and public funding. The City of Berkeley (City) requires applicable private development to include GI in new construction, which is resulting in many GI installations. Measure M bond funding, approved by Berkeley voters in 2012, is enabling the City to install several GI projects throughout the city.

In the future, the City will identify new opportunities to increase investment in GI. Increasing the scale of this work will require an integrated approach to infrastructure planning and design that enables the City to address decades of deferred street and stormwater system maintenance and repair while also achieving other benefits that help Berkeley adapt to changing climate conditions. To guide this work, the City will build on the Watershed Management Plan and Measure M implementation by developing a next-phase, comprehensive Stormwater Master Plan. This plan will be the result of extensive collaboration and analysis and will identify, evaluate, and prioritize stormwater system repairs, upgrades, and multi-benefit GI projects throughout the city. The plan will also identify necessary funding and financing options.

#### 3A

**Action lead(s):** City of Berkeley Department of Public Works, with support from the Public Works Commission; Planning Department; Department of Parks, Recreation and Waterfront; and City Manager's Office

**Partner(s):** MWH Global

**Launch timeline:** 2018-2019

### 3B. Innovate to diversify Berkeley's water supply

This first-ever Berkeley Resilience Strategy was developed during one of the most severe, multi-year droughts on record in California. Prolonged



*A rain garden was installed within a traffic circle at Vine and Spruce Steets.*

drought may in fact be the new normal for our state and region. Transitioning to this new normal and continuing to flourish in a drier climate require that our community continue to conserve water and treat it as the valuable, scarce resource that it is and innovate and diversify Berkeley's water supply.

The City relies on the East Bay Municipal Utility District (EBMUD) for its water supply. The water supply begins at the Mokelumne River watershed in the Sierra Nevada and extends 90 miles to the East Bay. The consistency of the water supply is highly dependent on the snow pack. During prolonged drought, reduced snow pack levels correlate to a diminished water supply for EBMUD customers. The City is analyzing several opportunities for water supply diversification, including:

- In partnership with the University of California (UC), Berkeley Climate Readiness Institute, examining the feasibility of utilizing accessible groundwater sources as backup water supply or to irrigate parks.



- Initiating an analysis of the potential to capture stormwater in below-street cisterns for use for street cleaning, irrigation, and other purposes and the conditions and technology necessary to do so.
- Analyzing the costs and benefits of a rainwater catchment incentive program that would encourage residents and businesses to reduce potable water use for irrigation by capturing and using rainwater.
- Working with EBMUD to access reclaimed water for street cleaning and other uses.

In combination, these efforts will help to diversify community water supply and achieve greater supply independence.

**3B**

**Action lead(s):** City of Berkeley Department of Public Works; Department of Parks, Recreation and Waterfront; and Office of Energy and Sustainable Development

**Partner(s):** UC Berkeley Climate Readiness Institute, EBMUD, and AECOM

**Launch timeline:** 2017

**3C. Create the landscape of the future**

In response to severe drought, the City reduced water consumption in municipal operations by over 40 percent between 2013 and 2015, saving approximately 35 million gallons of water and \$200,000 in utility costs per year. The City achieved

these results mainly by reducing irrigation and fixing leaks. Sustaining these trends while also protecting the health of the City’s landscapes and urban forest requires a long-term transition to new and evolving approaches to landscape and irrigation design that not only contribute to Berkeley’s beauty and livability, but also minimize water consumption. The City is committed to making this transition.

The City already prioritizes native, low-water use, pollinator-friendly plants in parks and medians and plants that produce less debris and therefore reduce the amount of fuel needed to transport and process waste.

To continue to adapt to changing climate conditions, the City will work with partners in the community, including local neighborhood and business associations, to replace unnecessary water-intensive turf with drought-tolerant alternatives and upgrade irrigation technology and equipment. The City is also working to supplement these water-saving efforts by diversifying its non-potable water supply.

**3C**

**Action lead(s):** City of Berkeley Departments of Parks, Recreation and Waterfront; and Public Works

**Partner(s):** Downtown Berkeley Association and EBMUD

**Launch timeline:** 2016

**3D. Integrate consideration of climate impacts into capital and land use planning**

Capital and land use planning efforts can no longer be based on the climate of the past. Instead, urban design and development must be informed by the latest climate science to determine how to best protect and modify existing public and private infrastructure and assets and how to design new infrastructure and assets.

Our neighbor, the City and County of San Francisco, is providing important leadership and tools for incorporating sea level rise into capital planning. In collaboration with San Francisco and other academic, government, non-governmental organization (NGO), and private-sector partners in the region, Berkeley will work to incorporate consideration of sea level rise and other climate impacts into public infrastructure and asset design and land use planning and site development standards for private assets. Ultimately, based on ongoing review of climate science and associated vulnerability assessments, the City will develop guidance for City departments and private developers on how to understand and incorporate the potential range of climate impacts that could occur within the project’s planning horizon and beyond.

**3D**

**Action Lead(s):** City of Berkeley Planning Department, Office of Energy and Sustainable Development, and City Manager’s Office

**Partner(s):** City and County of San Francisco

**Launch timeline:** 2018



Goal 4

# Advance Racial Equity





Racial equity will be achieved when race can no longer be used to predict life outcomes. The City of Berkeley government (City) and all local governments have a responsibility to identify and eliminate institutional barriers to racial equity. Although the City alone cannot eliminate racial inequity, proactive City leadership has the potential to support significant change.

With the support, encouragement, and advocacy of many organizations in our community, the City is committed to ensuring that racial equity is reflected throughout City policies and practices and is reinforced at all levels of the City organization. We do not start from scratch. The City’s Human Resources department already implements staff trainings focused on understanding and advancing the value of diversity and on integrating racial equity into hiring and promotional practices. The Berkeley Police Department, one of the most representatively diverse police departments in the United States, trains its officers to eliminate implicit bias. The Health, Housing, and Community Services Department has identified and publicized race-based health inequities for Berkeley residents and is working toward equal health opportunities for all. The goal of eradicating racial inequities informs much of the City’s outreach and services related to improving disaster preparedness and educational achievement.

The City and its partners are making progress, but much work remains to be done. The actions identified below reflect the City’s commitment to creating institutional change and advancing a collective racial equity agenda on a community scale.

**Resilience value**

By helping to advance racial equity, the actions described below help to enable the participation and contribution of all community members in all

aspects of Berkeley society. The participation of all community members—and contributions from them—is fundamental to Berkeley’s resilience.



*La Peña Cultural Center in Berkeley has promoted social justice, arts participation, and intercultural understanding for 40 years. La Peña is partnering with the City to improve access to disaster preparedness and other services.*

**What you can do**

**You can help advance racial equity in our community by ensuring that racial equity is reflected at your workplace. Engage your colleagues in developing a racial equity action plan that addresses issues such as workplace diversity and integrating equity into the organization’s budget or procurement.**



## GOAL 4 | ADVANCE RACIAL EQUITY

### 4A. Develop a City Racial Equity Action Plan

Over the past decade, a solid field of practice has emerged that advances racial equity and transforms government. The field of practice is based on the experience of cities and counties across the U.S. that have developed and implemented racial equity tools, policies, and partnerships. A national network of local and regional governments working to achieve racial equity, called the Government Alliance on Race and Equity (GARE), has documented and helped to advance the field of practice. The City and several other Bay Area cities and counties, including Oakland and San Francisco, are partnering with GARE to develop city-specific Racial Equity Action Plans. In collaboration with key stakeholders, including the City Personnel Board, the National Association for the Advancement of Colored People (NAACP), and employee labor unions, the City will develop, implement, and sustain its Racial Equity Action Plan. Components of the Plan designed to operationalize equity within the City government and to influence structural change community-wide include:

- Advancing workforce diversity by continuing to provide and optimize training for staff at all levels of City government that focuses on equitable hiring and promotion practices, valuing racial diversity, and offering career development for entry-level staff
- Improving City outreach and community engagement processes to enable all residents to have an opportunity to partici-

pate in decision-making and to expand the number of residents that do participate

- Consistently integrating a racial equity lens into the City’s budget and procurement processes to ensure that these processes benefit all demographic groups in the community
- Identifying specific results in City work plans that advance racial equity in City operations and services
- Evaluating and communicating data on racial equity that are used to track progress and inform strategy shifts if progress is not being made
- Sharing challenges, lessons learned, and best practices with other institutions and organizations in Berkeley

#### 4A

**Action lead(s):** City of Berkeley City Manager’s Office and all City departments

**Partner(s):** City of Berkeley Personnel Board, NAACP, Government Alliance on Race and Equity, and employee labor unions

**Launch timeline:** 2016

### 4B. Create a multi-departmental City “Advancing Racial Equity Team”

With support and representation from City leadership, the City will identify a multi-departmental team of staff to oversee and implement the Berkeley Racial Equity Action Plan. This team, the Advancing Racial Equity Team, will reflect the diversity of the community that the City serves and will guide the ongoing work of operationalizing racial equity at all levels of the City government.

#### 4B

**Action lead(s):** City of Berkeley City Manager’s Office

**Partner(s):** City of Berkeley Personnel Board, NAACP, Government Alliance on Race & Equity, employee labor unions

**Launch timeline:** 2016



### 4C. Continue to partner with organizations and institutions in the community to advance community-wide racial equity

In 2008, a multi-agency partnership was formed in Berkeley with the aim of ending the racial predict-



ability of academic achievement that exists in the Berkeley Public Schools. Called the 2020 Vision, the partnership is working to achieve academic success and well-being for all children and youth growing up in Berkeley by closing the achievement gap in Berkeley's public schools by the year 2020. The partnership includes the City, the Berkeley Unified School District, the Berkeley Alliance, UC Berkeley, Berkeley City College, the YMCA, and many other members of the Berkeley community. The 2020 Vision is a clear acknowledgment by leading Berkeley organizations that racial inequity persists in our community, and that it is unacceptable.

As it works to advance racial equity within its own organization, the City will build on existing efforts such as the 2020 Vision to create new structures and partnerships to help promote a collective racial equity agenda in the community. Priorities for the City and its partners moving forward include expanding services for families with children 0 to 3 years old to better prepare children for kindergarten and developing improved college and career readiness strategies for high-school-aged youth.

#### 4C

**Action lead(s):** City of Berkeley  
City Manager's Office

**Partner(s):** Berkeley Unified School District, UC Berkeley, Berkeley City College, Berkeley Alliance, YMCA, and many others

**Launch timeline:** 2016



Peace lanterns at a peace festival at the Berkeley Aquatic Park.  
More information at: <http://berkeleycityclub.com/festivals-and-annual-vents/>



## Goal 5

# Excel at Working Together within City Government to Better Serve the Community







The goals and actions identified in the Resilience Strategy meet some of Berkeley’s most pressing challenges head-on, including preparing for natural disasters, upgrading aging infrastructure, adapting to climate change, and advancing racial equity. Although the City of Berkeley government (City) is certainly not the only entity in the community that has a role in addressing these big challenges, it must provide vision and effective leadership. The City must continue to break down traditional governmental “silos” and integrate the expertise and knowledge within City departments and divisions to implement solutions that engage and create multiple benefits for many people. The actions identified below are the practical next steps that the City will take to excel at providing the leadership necessary to take on some of the community’s most pressing challenges.

**Resilience value**

Through the actions identified here, the City will improve access to services for all residents; further integrate sustainability and equity throughout City operations; improve City government efficiency through increased multi-disciplinary, multi-departmental collaboration; and deepen community engagement in local decision-making.



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**In 2015, the City of Berkeley held a friendly competition between departments to develop a “One City Team” logo, which represents the commitment of City employees to work together as a team to provide excellent service to the community.**

**The winning logo, shown here, was submitted by the Fire Department.**

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## GOAL 5 | EXCEL AT WORKING TOGETHER WITHIN CITY GOVERNMENT TO BETTER SERVE THE COMMUNITY

### 5A. Engage the community in the development of a Berkeley Strategic Plan

The City is launching a strategic planning process to better articulate the long-term goals that the City will work to achieve in service to the community and the short-term priority projects designed to achieve those goals. The Berkeley Strategic Plan will serve as a tool against which future potential projects and policies can be evaluated and prioritized. This plan will be integrated with the City’s two-year budget cycle, and its ongoing implementation will be guided by a transparent, easy-to-access performance-reporting dashboard on the City’s website.

Every community member and City staff person will have an opportunity to participate in the strategic planning process through web-based surveys, public workshops, and other events. The planning process and the plan itself will be designed to foster integrated, multi-disciplinary, and multi-benefit solutions to the challenges our community faces. By identifying actions that address some of our community’s most pressing challenges, the Berkeley Resilience Strategy dovetails with the strategic planning process. The Berkeley Strategic Plan will build on the Resilience Strategy by addressing additional challenges, such as homelessness, affordable housing, and public safety and by serving as the City’s ongoing performance management guide.

#### 5A

**Action lead(s):** City of Berkeley  
City Manager’s Office

**Partner(s):** City commissions, neighborhood and business associations, and many others

**Launch timeline:** 2016

### 5B. Implement opportunities for multi-departmental input on major City plans and projects

The City is evaluating a range of mechanisms designed to increase “cross-silo” coordination within the City government. The City already places high value on multi-departmental coordination. Development of the Berkeley Resilience Strategy, with its focus on multi-disciplinary, multi-benefit solutions to pressing challenges, is helping to advance and institutionalize this approach.

The mechanisms being evaluated will serve as triggers for ensuring that major plans and projects, such as large capital improvement projects, benefit from the expertise and guidance of staff in all City departments, including the staff who lead the City’s efforts to advance sustainability, public health, racial equity, and fiscal goals. A trigger for multi-departmental review will help to further integrate consideration of a diverse range of community priorities into any given project or plan. An example of an existing mechanism that the City currently uses and could replicate for other purposes is the interdepartmental roundtable meetings that the City’s Land Use Planning staff coordinate



*Volunteers spend day of service at a local park for Berkeley Project day.*

for any large private development project. Early in the design phase of a building, such as a new mixed-use, transit-oriented development in Downtown Berkeley, a team of urban planning, economic development, public works, parks, public safety, and sustainability staff, among others, meets with the private development team to review the preliminary design in the context of existing State and local requirements and, as appropriate, to provide guidance on designing a project that goes beyond what is required. The City is evaluating the next steps for institutionalizing a similar multi-departmental review of other major plans and projects, among other mechanisms.

#### 5B

**Action lead(s):** City of Berkeley  
City Manager’s Office

**Launch timeline:** 2016



### 5C. Improve major City information technology systems

To improve access to services and information for community members and create more efficient financial and information management processes for City staff, the City is replacing its current website infrastructure and core data management software. This investment in improving major City government information technology systems is based on input from community members and City staff. The current systems do not efficiently provide community members with easy access to information and services online (for example, the ability to pay fees via the City website) or adequately foster uniform data management across City departments. Replacement of the City's web infrastructure and core data management software will also help the City to better provide timely information in the event of a disaster and better track and manage disaster recovery operations. Effective tracking and documentation of disaster recovery activities and expenditures are critical for enabling recovery of those costs from the Federal government in the event of a federally declared disaster.

#### 5C

**Action lead(s):** City of Berkeley Department of Information Technology, Finance Department, and City Manager's Office

**Launch timeline:** 2016



Local volunteers paint a mural at Berkeley Youth Alternatives.



Goal 6

# Build Regional Resilience



*From right to left: Mayor Tom Bates of Berkeley, Mayor Ed Lee of San Francisco, and former Mayor Jean Quan of Oakland join The Rockefeller Foundation President Judith Rodin and 100RC President Michael Berkowitz at the launch event for 100RC in the Bay Area*



The City of Berkeley (City) is one of 101 cities in the San Francisco Bay Area. The region spans approximately 6,900 square miles of land and is home to over 7.5 million people.

Each of the Bay Area cities has qualities that make it unique, including its culture, food, topography, and politics. But Bay Area cities also share many qualities in common, not least of which are the physical, social, and economic challenges that Berkeley's Resilience Strategy is designed to address. Natural disasters, climate change impacts, aging public infrastructure, racial inequity—these challenges are not confined within the boundaries of any one city.

At times it may be tempting or feel easier for cities to take on these challenges in isolation. But identifying solutions that match the scale of the challenges we face requires regional coordination. Regional coordination has the potential to increase the reach of good ideas and increase the influence of cities' concerns and needs. Because cities are interdependent and frequently share resources, each city stands to benefit when the region as a whole becomes more resilient.

100 Resilient Cities (100RC)—Pioneered by The Rockefeller Foundation, knew well the value of regional approaches to problem solving when it selected Berkeley, San Francisco, and Oakland as three of the first 32 cities to participate in 100RC. The 100RC program also provided support to the region's Association of Bay Area Governments (ABAG) to help spread lessons from the three cities' resilience planning efforts and to contribute to a collective resilience agenda at a regional scale.

The actions discussed below are designed to identify specific, tangible projects to which Berkeley—along with many other cities—is contributing to advance a regional resilience agenda.

### Resilience value

The actions identified here promote long-term integrated planning to better prepare the region for climate change impacts, natural disasters, and other challenges; empower cities and the communities they serve to collectively advocate for the resources needed to effectively build the region's resilience; and foster partnerships between public agencies, private-sector entities, lifeline agencies, and community-based organizations to develop and implement innovative solutions.





## GOAL 6 | BUILD REGIONAL RESILIENCE

### 6A. Develop and launch a regional Resilience by Design Challenge

The City is contributing to the development and launch of a regional urban planning and design competition. The Resilience by Design Challenge (the Challenge) will unite multi-disciplinary teams of architecture, landscape architecture, urban design, ecology, and finance experts with community members and local and regional government leaders to identify innovative, actionable urban design solutions that help prepare the region for the impacts of climate change. The Challenge is an opportunity to elevate the public dialogue regarding our rapidly changing climate and to develop multi-benefit solutions that improve our communities.

Multi-disciplinary design teams from around the world will be invited to apply to participate. Selected teams will conduct intensive research of existing conditions, challenges, and opportunities and will then work with local government and community stakeholders to develop design solutions that will help communities adapt to and prepare for the impacts of climate change, such as flooding and drought. A jury will review the teams' final designs and select winners. Local government partners will work with selected teams to develop project implementation plans and funding sources. The outcome of the Challenge will be a set of robust design solutions that make our communities and our region more resilient.

#### 6A

**Action lead(s):** Managing partners include the Bay Conservation and Development Commission (BCDC); ABAG; Coastal Conservancy; Bay Area Regional Collaborative; San Francisco Bay Area Planning and Urban Research Association (SPUR); San Francisco Estuary Institute; City of San Francisco Planning Department; and Chief Resilience Officers of Berkeley, Oakland, and San Francisco

**Partner(s):** Bay Area local governments and communities

**Launch timeline:** 2016

### 6B. Launch a regional Sustainable Water Summit

As a result of climate change, periods of drought are expected to become longer and more severe in California. This challenge is exacerbated by a growing population—the Bay Area is expected to grow by approximately 2 million residents over the next 25 years.

Berkeley and other Bay Area communities are taking steps to improve their water conservation efforts and diversify their water supply. To help accelerate, align, and increase the scale of existing efforts, the City will contribute to convening a regional Sustainable Water Summit, which will focus on identifying strategies for the long-term, sustainable management of water resources. With coordinating assistance from ABAG, the summit will involve participation by public, private, non-profit, and academic entities.

#### 6B

**Action lead(s):** ABAG

**Partner(s):** The Federal Emergency Management Agency (FEMA), the City of Berkeley and other Bay Area local governments, Bay Area academic institutions, water utilities, community-based organizations, foundations, and other funding agencies

**Launch timeline:** 2016

### 6C. Establish a Regional Lifelines Council

Lifelines are the energy, water, transportation, and communications systems that are part of the fabric of our communities. These systems are essential for daily life and disaster response and recovery, but they are also vulnerable to disruption from earthquake, wildfire, and other shocks. The agencies that own and operate lifeline services in the Bay Area, such as water and energy utilities, the San Francisco Bay Area Rapid Transit District (BART), and others, are making significant strides in designing, constructing, and upgrading critical facilities to reduce risk. To accelerate and align these efforts, the City is contributing to the efforts of ABAG to design and launch a Regional Lifelines Council (Council). The Council will be made up of representatives from lifeline agencies, local governments, and non-governmental organizations (NGOs). The Council will enable improved communication and collaboration, shared disaster response and recovery planning. The Council will also develop and implement clearly defined,



coordinated processes for restoring lifeline systems as quickly as possible after a disaster.

**6C**

**Action lead(s):** ABAG and the U.S. Department of Homeland Security Office of Infrastructure Protection

**Partner(s):** City of Berkeley and other Bay Area local governments; Bay Area lifeline agencies; other regional, state, and federal agencies; foundations; and other funding agencies

**Launch timeline:** 2017

**6D. Catalyze investment in the region’s public infrastructure**

The City, like many cities, is faced with the challenge of how to identify the tens of millions of dollars necessary to upgrade and maintain aging, degrading public infrastructure. Streets, sidewalks, stormwater systems, parks, and community-serving facilities are in need of repair and renovation to continue to effectively serve their functions. This challenge is exacerbated by the impacts of climate change, such as flooding due to sea level rise, and natural disasters, such as earthquakes.

The City will work with ABAG, the Cities of Oakland and San Francisco, and other Bay Area local governments and organizations to catalyze development of a regional infrastructure finance agenda that can attract additional, much-needed public and private investment. Collectively, Bay

Area cities can articulate the scale of the need for additional infrastructure investment—and the risk of not making adequate investment—more effectively than one city can on its own.

**6D**

**Action lead(s):** City of Berkeley and ABAG

**Partner(s):** Bay Area local governments

**Launch timeline:** 2017

**6E. Form regional alliances for policy advocacy**

A single jurisdiction cannot on its own effectively adapt to sea level rise, improve the regional transportation network, respond to drought, prepare for and recover from a disaster, take on the affordable housing challenge, and develop the region’s economy of the future. Given the regional nature of many of the Bay Area’s most pressing challenges and most effective solutions, the City is committed to continuing to participate in and elevate action-oriented regional collaboration.

Tangible opportunities to advance regional coordination include partnering with the other 100RC Network cities in the region and state—the Cities of Oakland, San Francisco, and Los Angeles—to share lessons learned in resilience planning with other Bay Area and California cities and continuing to participate in ABAG’s East Bay Corridor Initiative, which is a platform for developing common policies and practices among East Bay cities. Given the

risk of earthquake in the East Bay, to date the East Bay Corridor Initiative has placed particular and helpful emphasis on development of consistent ordinances for encouraging or requiring upgrades to the region’s most vulnerable building stock. Effective policies developed at the regional level can affect action throughout the state and beyond.

**6E**

**Action Lead(s):** The Cities of Berkeley, Oakland, San Francisco, and Los Angeles; other Bay Area cities; and ABAG

**Launch timeline:** 2016



View from the Berkeley Hills.

**APPENDIX: SUMMARY OF BERKELEY RESILIENCE GOALS AND ACTIONS**

Action	Action Lead(s)	Partner(s)	Funding Source(s)	Launch Timeline
<b>Goal #1: Build a Connected and Prepared Community</b>				
1A. Create safe (and green) City community centers and care and shelter facilities	City of Berkeley City Manager's Office; Departments of Public Works; Parks, Recreation & Waterfront; Health, Housing & Community Services; and the Office of Emergency Services	Risk Management Solutions (RMS)	The James Kenney Community Center seismic retrofit is funded by a combination of voter-approved Parks Tax (Measure F) funds, federal grant funds, and the City General Fund. The City is working with community partners to identify funding and financing to upgrade the other six care and shelter facilities.	2016 for the James Kenney Community Center retrofit; upgrades for the other six facilities after 2016.
1B. Launch the Community Resilience Center Program	City of Berkeley Office of Emergency Services, Public Health Division, and City Manager's Office	Initial partners include Berkeley Youth Alternatives, Ed Roberts Campus, Harriet Tubman Terrace, La Peña Cultural Center, Head Start, and McGee Baptist Church	Voter-approved special tax funds (Measure GG).	2016
1C. Foster neighbor-to-neighbor connections to advance disaster readiness	City of Berkeley Office of Emergency Services and City Manager's Office	Berkeley Disaster Preparedness Neighborhood Network	Voter-approved special tax funds (Measure GG).	2016
1D. Maximize the City's ability to secure Federal disaster recovery funding	City of Berkeley Office of Emergency Services and City Manager's Office	To be determined	Voter-approved special tax funds (Measure GG).	2016
1E. Prepare for wildfires in the Berkeley Hills	City of Berkeley Fire and Police Departments	Berkeley Path Wanderers Association, neighborhood associations, and neighboring cities	Voter-approved special tax funds (Measure GG), and City General Fund.	2016 (ongoing)



**APPENDIX: SUMMARY OF BERKELEY RESILIENCE GOALS AND ACTIONS**

Action	Action Lead(s)	Partner(s)	Funding Source(s)	Launch Timeline
1F. Continue to improve the seismic safety of Berkeley’s most vulnerable apartment buildings	City of Berkeley Building and Safety Division	To be determined	Transfer tax rebate, Property Assessed Clean Energy (PACE) financing, and private investment.	2016 (ongoing)
<b>Goal #2: Accelerate Access to Reliable and Clean Energy</b>				
2A. Develop a clean energy micro-grid network	City of Berkeley Office of Energy and Sustainable Development, City Manager’s Office, Department of Public Works, and Planning Department	Pacific Gas and Electric Company (PG&E), California Public Utilities Commission (CPUC), California Independent System Operator (CAISO), Lawrence Berkeley National Laboratory (LBNL), and AECOM	The City is pursuing grant funding opportunities.	2018
2B. Advance clean energy through “Community Choice Aggregation”	City of Berkeley Office of Energy and Sustainable Development	Alameda County and Berkeley Climate Action Coalition	Alameda County and private investment.	2017
2C. Develop a Solar Action Plan to meet 50 percent of Berkeley’s power demand through solar energy by 2030	City of Berkeley Energy Commission, and Office of Energy and Sustainable Development	University of California (UC), Berkeley, and the Community Energy Services Corporation Smart Solar Program	City General Fund and private investment.	2017
2D. Electrify Berkeley’s vehicles	City of Berkeley Office of Energy and Sustainable Development, Planning Department, and Department of Public Works	EV Coordinating Council (supported by the Bay Area Air Quality Management District (BAAQMD) and the Metropolitan Transportation Commission (MTC)), Prospect Silicon Valley/Bay Area Climate Collaborative, and the Governor’s Office of Planning and Research (OPR)	State grant funding, philanthropy, City General Fund, and private investment.	2016

**APPENDIX: SUMMARY OF BERKELEY RESILIENCE GOALS AND ACTIONS**

Action	Action Lead(s)	Partner(s)	Funding Source(s)	Launch Timeline
2E. Encourage fuel switching to consume cleaner energy in all buildings	City of Berkeley Office of Energy and Sustainable Development, Planning Department, and Building and Safety Division	To be determined	Not yet identified.	2019
2F. Launch a Climate Action Plan “Ideas Competition”	City of Berkeley Office of Energy and Sustainable Development and Office of Economic Development	Cities of Palo Alto, Santa Monica, and Aspen; Urban Sustainability Directors Network; and Presidio Graduate School	Philanthropy.	2016
<b>Goal #3: Adapt to the Changing Climate</b>				
3A. Integrate multi-benefit green infrastructure into street improvement projects	City of Berkeley Department of Public Works, with support from the Public Works Commission; Planning Department; Department of Parks, Recreation and Waterfront; and City Manager’s Office	MWH Global	Voter-approved bond (Measure M). The City is also pursuing additional funding sources.	2018–2019
3B. Innovate to diversify Berkeley’s water supply	City of Berkeley Departments of Public Works; Parks, Recreation and Waterfront; and Office of Energy and Sustainable Development	UC Berkeley Climate Readiness Institute, East Bay Municipal Utility District (EBMUD), and AECOM	Not yet identified.	2017
3C. Create the landscape of the future	City of Berkeley Departments of Parks, Recreation and Waterfront; and Public Works	Downtown Berkeley Association and EBMUD	City General Fund.	2016

**APPENDIX: SUMMARY OF BERKELEY RESILIENCE GOALS AND ACTIONS**

<b>Action</b>	<b>Action Lead(s)</b>	<b>Partner(s)</b>	<b>Funding Source(s)</b>	<b>Launch Timeline</b>
3D. Integrate consideration of climate impacts into capital and land use planning	City of Berkeley Planning Department, Office of Energy and Sustainable Development, and City Manager's Office	City and County of San Francisco	Not yet identified.	2018
<b>Goal #4: Advance Racial Equity</b>				
4A. Develop a City Racial Equity Action Plan	City of Berkeley City Manager's Office and all City departments	City of Berkeley Personnel Board, National Association for the advancement of Colored People (NAACP), Government Alliance on Race & Equity, and employee labor unions	City General Fund.	2016
4B. Create a multi-departmental City "Advancing Racial Equity Team"	City of Berkeley City Manager's Office	City of Berkeley Personnel Board, NAACP, Government Alliance on Race & Equity, and employee labor unions	City General Fund.	2016
4C. Continue to partner with organizations and institutions in the community to advance community-wide racial equity	City of Berkeley City Manager's Office	Berkeley Unified School District, UC Berkeley, Berkeley City College, Berkeley Alliance, YMCA, and many others	City General Fund.	2016
<b>Goal #5: Excel at Working Together within City Government to Better Serve the Community</b>				
5A. Engage the community in the development of a Berkeley Strategic Plan	City of Berkeley City Manager's Office	City commissions, neighborhood and business associations, and many others	City General Fund.	2016

**APPENDIX: SUMMARY OF BERKELEY RESILIENCE GOALS AND ACTIONS**

Action	Action Lead(s)	Partner(s)	Funding Source(s)	Launch Timeline
5B. Implement opportunities for multi-departmental input on major City plans and projects	City of Berkeley City Manager's Office	To be determined	City General Fund.	2016
5C. Improve major City information technology systems	City of Berkeley Department of Information Technology, Finance Department, and City Manager's Office	To be determined	City General Fund.	2016
<b>Goal #6: Build Regional Resilience</b>				
6A. Develop and launch a regional Resilience by Design Challenge	Bay Conservation and Development Commission (BCDC); Association of Bay Area Governments (ABAG); Coastal Conservancy; Bay Area Regional Collaborative; San Francisco Bay Area Planning and Urban Research Association (SPUR); San Francisco Estuary Institute; City of San Francisco Planning Department; and Chief Resilience Officers of Berkeley, Oakland, and San Francisco	Bay Area local governments and communities	City and County of San Francisco; philanthropy; and additional public and private investment.	2016
6B. Launch a regional Sustainable Water Summit	ABAG	The Federal Emergency Management Agency (FEMA), the City of Berkeley and other Bay Area local governments, Bay Area academic institutions, water utilities, community-based organizations, foundations, and other funding agencies	ABAG is managing this effort with funding from FEMA.	2016

**APPENDIX: SUMMARY OF BERKELEY RESILIENCE GOALS AND ACTIONS**

Action	Action Lead(s)	Partner(s)	Funding Source(s)	Launch Timeline
6C. Establish a Regional Lifelines Council	ABAG and U.S. Department of Homeland Security Office of Infrastructure Protection	City and other Bay Area local governments; Bay Area lifeline agencies; and other regional, State, and Federal agencies	ABAG is coordinating this project with the U.S. Department of Homeland Security's Office of Infrastructure Protection.	2017
6D. Catalyze investment in the region's public infrastructure	City of Berkeley and ABAG	Bay Area local governments	Not yet identified.	2017
6E. Form regional alliances for policy advocacy	The Cities of Berkeley, Oakland, San Francisco, and Los Angeles; other Bay Area cities; and ABAG	To be determined	Local and regional government funds.	2016

# Acknowledgements

The City of Berkeley (City) would like to thank the many partners that contributed to the Berkeley Resilience Strategy. Most importantly, the City thanks the hundreds of community members who participated in public workshops and surveys and provided thoughtful input and creative ideas.

Special thanks to the tremendous support provided by the team at 100 Resilient Cities—Pioneered by The Rockefeller Foundation, including Corinne LeTourneau, Amy Armstrong, Paul Nelson, Michael Berkowitz, Andrew Salkin, Leah Flax, Rebecca Laberenne, Andrew Brenner, Bryna Lipper, and the rest of the team.

The City wishes to thank the Cities of Oakland and San Francisco for their leadership and partnership, especially Victoria Salinas (Oakland) and Patrick Otellini (San Francisco).

Finally, the City offers its sincere thanks and appreciation to the following organizations and individuals:



Timothy Burroughs  
Dee Williams-Ridley  
Katie Van Dyke  
Carol Johnson  
Caytie Campbell-Orrock  
Cheryl Johnson  
Christina Erickson  
Daniel Akagi  
David Brannigan  
Farid Javandel  
Gil Dong  
Jennifer Lazo  
Jenny McNulty  
Kem Loong  
Khin Chin

Lincoln Casimere  
Marna Schwartz  
Matthai Chakko  
Mike Meehan  
Neal De Snoo  
Paul Kaushal  
Phil Harrington  
Sarah Lana  
Sarah Moore  
Sarah Reynoso  
Scott Ferris  
Sean Rose  
Sue Ferrera  
Suzanne Ridel  
Tasha Tervalon  
Tracy Clay  
Wilhelmina Parker- Bentum

Michael Berkowitz  
Amy Armstrong  
Andrew Brenner  
Andrew Salkin  
Bryna Lipper  
Corinne LeTourneau  
Leah Flax  
Rebecca Laberenne  
Paul Nelson

Kris May  
Claire Bonham-Carter  
Alexander Quinn  
Amruta Sudhalkar  
Bryce Wilson  
Jay Plano  
Kerry Rubin  
Laura Adleman  
Matthew Smith  
Michael Mak  
Phil Aro  
Ricky Torres-Cooban  
Thia Buggia  
Yanna Badet



Arrietta Chakos  
Dana Brechwald  
Michael Germeraad  
Duane Bay  
Jenny Berg

## 100RC Platform Partners



## Organizations and Individuals

Bay Conservation and Development Commission  
Berkeley Climate Action Coalition  
Berkeley Disaster Preparedness Neighborhood Network  
Berkeley Unified School District  
Climate Readiness Institute  
Community Energy Services Corporation  
Earthquake Brace + Bolt Program  
East Bay Municipal Utility District  
Joe Parks—[www.flickr.com/parksjd](http://www.flickr.com/parksjd)  
Lawrence Berkeley National Laboratory  
Pacific Gas and Electric Company  
Rebuild by Design  
University of California, Berkeley  
Urban Sustainability Directors Network



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