

## Mayor's Letter

On behalf of the City and County of San Francisco it is my honor to request that the United Nations International Strategy for Disaster Reduction (UNISDR) approves our application to become a member of the "Making Cities Resilient" campaign.

The City and County of San Francisco has performed a complete review of its programs in line with the UNISDR Campaign: Ten Essentials Guidelines. Based on the review of these materials, we are confident that the City and County of San Francisco is successfully achieving the performance goals set forth by the UNISDR.

Today San Francisco is working diligently to advance our City's, as well as its resident's, capacity to be able to respond to any challenge that may arise in the near or distant future. From the ongoing threat of a major earthquake on one of the several faults that surround our home to the challenges we will face in the coming decades as a result of climate change, we are committed to making smart investments in both our physical and social infrastructure that will yield immeasurable benefits at a later date.

We encapsulate this work in an initiative called ResilientSF which offers all stakeholders both a framework and a roadmap for generations to come to follow as we pursue the eternal mission of resilience.

Through our enrollment in the UNISDR, the City and County of San Francisco looks forward to sharing information about the work we are doing and as well as learn from the work of other cities in this important policy area.

Thank you for considering our application and we look forward to advancing as a global community on the greatest challenge of our time.

Sincerely,

Mayor Edwin M. Lee

	Specifications
City/Local Government	<p data-bbox="394 268 938 304">City and County of San Francisco (CCSF)</p> <p data-bbox="394 342 800 447">San Francisco City Hall: 1 Dr. Carlton B. Goodlett Place San Francisco, CA 94102</p> <p data-bbox="394 489 951 525"><b>Government:</b> Mayor/Board of Supervisors</p> <p data-bbox="394 562 1450 850">CCSF’s government consists of two branches; the executive and the legislative. The legislative branch is the Board of Supervisors, which is composed of 11 members who are elected by a majority vote from residents of their district. The Board of Supervisors is led by a president, who is chosen by its members. The Board serves as the City Council due to CCSF’s unique nature as a City and a County. The executive branch is led by the Mayor, who acts as the chief executive officer and the official representative of the City and County. The Mayor is also responsible for overseeing the budget’s planning and implementation.</p> <p data-bbox="394 888 1125 924"><b>Economy:</b> Tourism, financial, academic, and technology</p> <p data-bbox="394 961 1433 1182">CCSF is a worldwide tourist destination and boasts some of the most popular attractions in the United States. The City and County is also a global financial center housing 30 of world’s largest financial institutions. San Francisco’s tourist industry is the 5<sup>th</sup> largest in the world and generates more than \$8 billion a year while attracting some 9 million people to the Golden Gate Bridge alone. CCSF’s current budget (2012) is \$6.83 billion.</p> <p data-bbox="394 1220 1458 1360">San Francisco serves at the center of the Bay Area which includes the metropolitan areas of Oakland and San Jose. The Gross Domestic Product (GDP) of this region is \$487 billion as of 2009, while the approximate GDP for the entire US is \$14.6 trillion.</p> <p data-bbox="394 1398 633 1434"><b>Location:</b> Coastal</p> <p data-bbox="394 1472 1466 1619">San Francisco is physically located on the coast of Northern California. It forms the northern tip of the peninsula lying between San Francisco Bay and the Pacific Ocean and is bordered by the Pacific Ocean to the west, the San Francisco Bay to the north and east, and by San Mateo County to the south.</p> <p data-bbox="394 1656 740 1692"><b>Geographic Coordinates:</b></p> <p data-bbox="394 1730 1422 1801">The City and County of San Francisco is located at 37 degrees 46 minutes 45.48 seconds North, 122 degrees 25 minutes 9.12 seconds West.</p> <p data-bbox="394 1839 464 1875"><b>Size:</b></p>

	<p>The City and County of San Francisco is 231.89 square miles, with 46.87 square miles of land and 185.02 square miles of water.</p> <p><b>Climate:</b> Temperate and Mediterranean</p> <p>San Francisco’s climate is temperate and Mediterranean, ranging from 40 to 70 degrees Fahrenheit on average. Due to the city’s unique geographical and marine surroundings, it is noted to have several microclimates within its borders.</p> <p><b>Population:</b> According to the 2010 Census, the City and County of San Francisco’s population is 805,235, with an estimated population density of 17,160 square miles (6,632 per square km), making it the second most densely populated city in the United States. The city also has a fairly unique population distribution, with a racial composition of 390,387 whites (48.5%), 267,915 Asians (33.3%), 121,744 Hispanics or Latinos (15.1%), 48,870 African Americans (6.1%), 4,024 Native Americans (0.5%), 3,359 Pacific Islanders (0.4%), 53,021 other races (6.6%), and 37,659 from two or more races (4.7%).</p>	
Name of Mayor	Mayor Edwin M. Lee	
City Administration Serving as Focal Point for the Campaign	The City Administrator’s office will be serving as the focal point for the Campaign.	
Contact Details for Focal Point	Name	Daniel Homsey
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Major Disaster Risks (Indicate major disasters that have occurred, prevailing hazards and vulnerable conditions)	<p><b>Hazards:</b></p> <p>The City and County of San Francisco adopts an all-hazards approach to emergency management. San Francisco’s primary hazards are:</p> <ul style="list-style-type: none"> <li>• Seismic hazards <ul style="list-style-type: none"> <li>○ Ground shaking</li> <li>○ Ground failure (landslide and liquefaction)</li> <li>○ Tsunami</li> </ul> </li> <li>• Weather-related <ul style="list-style-type: none"> <li>○ Drought</li> <li>○ Flood (coastal and storm water ponding)</li> <li>○ Heat</li> <li>○ Landslide</li> </ul> </li> </ul>	

- Wildfire
- Wind
- Global climate change
  - Sea level rise
  - Altered weather patterns
- Other hazards
  - Reservoir failure
  - Urban Fire
  - Human-caused (cyber attack, hazardous material, WMD, energy supply, and terrorism)

San Francisco recognizes that several of the primary hazards that it faces are linked, such as seismic activity and fire or the variable conditions of climate change, and thus addresses them in depth in its various emergency plans.

**Vulnerable Conditions:**

This list presents a brief synopsis of the hazards and vulnerable conditions in San Francisco; for more in depth information see the CCSF Hazard Mitigation Plan located at <http://www.sfdem.org/index.aspx?page=4>.

*Global Climate Change:*

San Francisco is located in a coastal climate zone and has recognized the growing threat it faces with global climate change. San Francisco is already a leader in sustainability, having been named the greenest city in North America by Siemens Green City Index in 2011. Despite these achievements, San Francisco still faces the hazards that are connected with global climate change. The city recognizes these hazards as:

- Sea level rise, 2-4 feet before the end of the century
  - This would affect San Francisco Airport, Oakland Airport, all port facilities, major public transit lines and highways, the city’s main food and water delivery systems, as well as commercial and residential neighborhoods
- Increased weather activity
- Heightened storm surge potential
- Reduced snow pack in the Sierra Nevada Mountains (a primary water source)

*Seismic Hazards:*

San Francisco is exposed to several seismic hazards from both known mapped fault systems and undiscovered systems. The primary risks in the area come from the San Andreas fault system and the Hayward fault system; both of which are strike slip fault zones. There is a 63 percent chance that a severe earthquake (Magnitude 6.7 or greater) will strike the area in the next 30 years. The major hazards associated with seismic activity in San Francisco are:

- Ground Shaking

- Liquefaction
- Lateral Spread
- Earthquake-Induced Landslide
- Earthquake-Induced Fire

*Tsunami:*

CCSF's primary tsunami risk does not come from any of the local fault lines as they are all strike-slip. The threat comes from subduction zones elsewhere along the Pacific basin and Alaska. San Francisco has experienced tsunami run-up an average of once every 28 years, but the height of these run-ups is generally only a few inches. Despite the history of small tsunamis, the City recognizes that it is still at risk for a potentially large inundation.

*Drought:*

CCSF's climate has a cyclic relationship with droughts and an average recurrence interval between 4 and 10 years. Droughts can occur in both summer and winter and will affect the water sources for the entire area. Droughts of more than 3 years are rare and San Francisco has never had a federally declared disaster for a drought, but the State of California has. Nevertheless, the City recognizes that droughts can be a serious concern and that global climate change may be increasing their likelihood.

*Flood:*

CCSF faces the risk of both coastal flooding and storm water ponding. The city can expect to see coastal flooding begin at 3 feet of inundation with the likelihood of recurrence every 7 to 8 years given strong El Nino conditions. Storm water ponding is generally only a few inches but heavy rainfalls can increase it to greater than 4 feet. This type of flood occurs primarily in winter with heavy rainfall and its recurrence rate is nearly every year. The City is researching sea level rise and adaptation measures to improve its management of coastal flooding in response to global climate change.

*Landslide:*

CCSF's primary risk from landslides stems from seismic activity but the city also faces regular landslide risks due to the geographic nature of the area. Landslides generally occur during the wet winter months after high levels of precipitation and typically encompass less than 1,500 feet. San Francisco can expect to experience weather related landslides every 7 to 10 years.

*Urban Fire:*

CCSF has been devastated by major fires several times. The most severe was in the wake of the 1906 earthquake. The resulting fire killed hundreds of people and directly caused the destruction of 25,000 buildings. San Francisco's high urban population density, the second highest in the United States, increases its likelihood of large scale fires. The City experiences 5 to 6 fires of two-alarm or larger a year. The greatest urban fire risk is associated with the likelihood of a severe earthquake.

	<p><b>Major Disasters:</b> CCSF has faced several major disasters in its history, with the most devastating coming primarily from seismic activity.</p> <ul style="list-style-type: none"> <li>• The 1906 San Francisco Earthquake and Fire is widely known as one of the worst natural disasters to have occurred in the history of the United States. It is estimated to have had a moment magnitude of 7.7, caused an estimated 2,000 deaths and ignited 52 fires, destroying approximately 28,000 buildings on 490 city blocks as a result of both ground shaking and fire damage.</li> <li>• The 1989 Loma Prieta Earthquake occurred south of San Francisco and caused over 3,000 injuries, collapsed portions of multiple bridges, including the Bay Bridge connecting Oakland and San Francisco. The earthquake was unique in that its rupture occurred during the broadcast of a professional baseball game, making it the first major earthquake with a nationally broadcast jolt.</li> </ul>
<p>Progress and Results (Indicate main areas of progress, based on the “ten essentials”) Describe the main areas of progress and achievements as well as Identify activities and plans your city will pay special attention to improve the current situation during the campaign and beyond. Additionally, feel free to propose special events or activates your city would like to undertake to raise awareness</p>	<p><b>Essential (1)</b> <i>Put in place organization and coordination to understand and reduce disaster risk within local government, based on participation of citizen groups and civil society-build local alliances. Ensure that all departments understand their role and contribution to disaster risk reduction and preparedness.</i></p> <p>CCSF has invested in organizational infrastructure, both inside and outside of government, to consistently assess the threats of major hazards to the City as well as deploy strategies that will mitigate their impact. In addition to supporting the private sector’s efforts to be more resilient, the City also actively supports programs that involve resident-run groups in the emergency management process. CCSF supports programs that nurture a citywide narrative emphasizing readiness amongst all relative agencies, departments, and cohorts.</p> <p>CCSF’s organization and coordination has achieved a sustained high level of functionality giving it a score of 3.</p> <p><u>Department of Emergency Management:</u> The San Francisco Department of Emergency Management (DEM) manages disaster preparation, mitigation, and response; 9-1-1 dispatch, and homeland security grant distribution for the City and County of San Francisco. DEM is a fully staffed department and is regularly responsible for:</p> <ul style="list-style-type: none"> <li>• Developing and managing multiple City Emergency and Hazard Plans</li> <li>• Leading public education and outreach initiatives to increase the preparedness of San Francisco’s residents, visitors, and organizations</li> <li>• Managing the distribution and use of local, state, and federal grants, including federal homeland security grants</li> <li>• Coordinating and planning exercises and training with City departments, outside agencies, and City partners</li> </ul>

on disaster resilience.

- Leading the local Emergency Medical Services Agency
- Activating and managing the Emergency Operations Center (EOC) during major citywide events and emergencies
- Coordinating public information at the Joint Information Center (JIC)
- Managing resource allocation and mutual aid
- Acting as the primary liaison with federal, state, and local governments, as well as the private sector both during incidents and regular operations
- More information is available at: <http://www.sfdem.org/>

DEM also facilitates and coordinates additional programs within the city including:

- Disaster Preparedness Coordinators:  
CCSF requires that each of its departments/agencies have a disaster preparedness coordinator. These coordinators meet regularly to share information and develop action plans based on the City's All-Hazards Strategic Plan.

More information is available at:

<http://www.sfdem.org/index.aspx?page=17>.

- Disaster Council:  
CCSF hosts a Disaster Council, which is chaired by the Mayor and composed of key department heads and City officials, three members of the Board of Supervisors, and representatives of private sector organizations appointed by the Mayor. The Council meets quarterly at the call of the Mayor to share information and ensure full participation by member agencies in the emergency planning activities of the City. Meetings are open to the public.

More information is available at:

<http://www.sfdem.org/index.aspx?page=15>.

- Citizen Corps:  
CCSF maintains and runs the local branch of Citizen Corps, which is a forum for community-based organizations to provide input into the City's disaster management activities.

More information is available at: <http://www.citizencorps.gov/>.

- Lifelines Council:  
CCSF's Lifelines Council is a public/private partnership between the City, key stakeholders, and major utilities to explore interdependencies and restoration strategies. The City's lifelines include; communications, electric power, liquid fuel, natural gas, transportation (airports, highways, ports, rail, and transit), water, and wastewater. The goal of the Lifelines Council is to:
  - Develop and improve collaboration in the City and across the region

- Understand inter-system dependencies to enhance planning, restoration and reconstruction
- Share information about recovery plans, projects, and priorities
- Establish coordination processes for lifeline restoration and recovery following a major disaster event

More information is available at: <http://sfgsa.org/index.aspx?page=4964>.

ResilientSF:

ResilientSF, an initiative organizationally supported by the City Administrator’s Office and the Department of Emergency Management, provides a framework and road map that coordinates plans, programs, resources and relationships that increase the capacity of individuals, organizations and communities to collectively solve problems and capture opportunities in an effort to improve the entire City’s capacity to be resilient.

More information is available at: <http://resilientsf.org/>.

Ten Year Capital Plan:

CCSF annually develops and adopts a ten-year capital expenditure plan for City-owned facilities and infrastructure. The capital plan makes recommendations to the Mayor and the Board of Supervisors on all of the City’s capital expenditures, which includes earthquake planning, public safety, and infrastructure protection. The capital plan serves to connect all City stakeholders from a unified policy and expenditure perspective.

More information is available at: <http://onesanfrancisco.org/>.

Climate Action Plan:

San Francisco adopted a Climate Action Plan committing the City to reducing greenhouse gas emissions by 20% below 1990 levels by 2012. The plan outlines actions the City can take to meet this goal. The Plan is currently being updated and is expected to be released in spring 2012.

More information is available at:

<http://www.sfenvironment.org/downloads/library/climateactionplan.pdf>.

Neighborhood Empowerment Network (NEN):

The NEN was established to help make the government a stronger partner in meeting the needs of the public. The NEN’s goal is to empower residents and their communities with the capacity and resources to build strong, safe, clean, healthy, inclusive, and economically resilient communities. The NEN builds coalitions of residents and community organizations, non-profits, academic institutions, private and governmental agencies; as well as leverages strategic partnerships to develop programs, create suites of tools and technical resources.

More information is available at: <http://empowersf.org/>.

Disaster Service Workers:

All employees of the CCSF are designated Disaster Service Workers and in the event of a disaster can be reassigned to duties outside of their regular day-to-day job responsibilities.

More information is available at: <http://www.sfdhr.org/index.aspx?page=271>.

**Essential (2)**

*Assign a budget for disaster risk reduction and provide incentives for homeowners, low-income families, communities, businesses and public sector to invest in reducing the risks they face.*

CCSF assigns an ongoing budget for disaster risk reduction that includes staff, programs, and projects. The City also utilizes programs that help get the general public and the private sector involved in risk reduction. Furthermore, CCSF considers emergency planning and risk reduction in its Capital Investment Plan as well as in the day-to-day operations in several city agencies.

CCSF has a disaster risk reduction budget that is soundly in place and well functioning and thus receives an achievement score of 3.

Funding for free disaster response training (NERT):

The CCSF Fire Department sponsors the NERT program. NERT is designed to cross-train citizens in the basic skills most commonly needed in a disaster. The 20 hour training includes personal preparedness, light search & rescue, disaster medicine, and how to shut off residential utilities.

More information is available at: <http://sf-fire.org/index.aspx?page=859>.

Free business continuity planning to non-profits:

The San Francisco Community Agencies Responding to Disaster (SFCARD) provides free disaster preparedness training to non-profits and faith-based organizations to help improve the broad capacity of all of the City's stakeholders.

More information is available at: <http://sfcard.org/wp/>.

Government Bonds:

To enhance and support projects that require large investments, CCSF often proposes and passes bonds. Since the 1989 Loma Prieta earthquake, voters have approved several General Obligation Bonds to retrofit facilities, and the City has completed nearly 200 projects with seismic components. The City is currently utilizing bonds on several seismic safety and retrofit projects.

- The Earthquake Safety and Emergency Response Bond is designed to protect first responder infrastructure and related services.
- The San Francisco General Hospital (SFGH) Bond is being utilized to rebuild the City's main hospital.
- The Branch Library Improvement Program (BLIP) is renovating and replacing each of the 24 branch libraries in the city to keep them seismically safe.
- The Water System Improvement Program (WSIP), managed by the Public Utilities Commission (PUC), is a project designed to make San Francisco's water supply more seismically resistant.

More information is available at: <http://onesanfrancisco.org/projects/major-programs/earthquake-safety/>.

Urban Area Security Initiative Funding:

CCSF is supported by the Urban Area Security Initiative (UASI). UASI oversees several projects related to homeland security and disaster preparedness and provides funding to the City to see the projects through.

More information is available at: <http://www.bayareauasi.org/default.aspx>.

Program Expenditure:

San Francisco regularly assigns a portion of its budget to programs and applications that serve as learning tools and ultimately help in reducing the overall risks that the City faces.

- SF\_Heroes
  - A mobile application designed to educate and motivate the public to learn about emergency preparedness using game mechanics.
  - More information is available at: <http://sfheroes.com/>.
- 72hours.org
  - A website that provides information on making family emergency plans, building emergency supply kits, and getting involved in training before a disaster occurs or volunteering to help out afterwards.
  - Available at: <http://72hours.org/>.
- Quakequizzesf.org
  - A website that tests knowledge of what to do if an earthquake strikes while at home, driving, on public transit, at the beach or at work.
  - Available at: <http://quakequizzesf.org/>.

**Essential (3)**

*Maintain up-to-date data on hazards and vulnerabilities, prepare risk assessments and use these as the basis for urban development plans and decisions. Ensure that*

*this information and the plans for your city's resilience are readily available to the public and fully discussed with them.*

CCSF maintains and updates a wide variety of data on hazards and vulnerabilities that it uses to develop policies and operations plans. The City makes the majority of its plans available to the public through various websites and it discusses aspects of the plans through its community partnerships.

CCSF's data is up to date, consistently maintained, and reflected in its functional emergency plans; for these reasons the City receives an achievement score of 3.

Community Acton Plan for Seismic Safety (CAPSS):

The CAPSS project will make policy recommendations to the Department of Building Inspection (DBI) regarding the earthquake performance of most privately-owned, existing buildings in the City, in order to reduce future earthquake damage and facilitate building repair.

More information is available at: <http://www.sfcapss.org/>.

Emergency, Vulnerability, and Hazard Plans:

San Francisco, primarily through DEM, regularly updates and maintains emergency plans. These plans are used in the development of citywide programs and are available to the public. Listed below are some of the key documents that the department prepares and manages.

- San Francisco All Hazards Strategic Plan
- Emergency Response Plan
- Hazard Mitigation Plan
- Area specific Annexes (fire, communications, care and shelter, hazardous materials, law enforcement, etc.)
- San Francisco Bay Area Regional Emergency Coordination Plan
- DEM Climate Action Plan

More information is available at: <http://www.sfdem.org/index.aspx?page=4>.

Climate Adaptation Risk Assessments:

The Mayor's Office has created an inter-departmental climate adaptation working group to identify potential climate change-related impacts on San Francisco's infrastructure and services. The City's Department of the Environment (SF Environment), which manages the citywide Climate Action Plan, works closely with city agencies on mitigation planning and implementation. Each of the 68 City departments has a designated climate liaison to support this effort. Some of the departments that will be most affected by climate change, including the Port, San Francisco International Airport, and the San Francisco Public Utilities Commission, have studied potential impacts on their properties and infrastructure.

**Essential (4)**

*Invest in and maintain infrastructure that reduces risk, such as flood drainage, adjusted where needed to cope with climate change.*

CCSF regularly invests in and maintains its critical infrastructure in areas such as building retrofits and water and sewer system updates. The City also invests in reducing its CO<sub>2</sub> footprint as well as energy security and independence.

CCSF's infrastructure investments and functional capacity give the City an achievement score of 3.

City Adaptation models:

In response to the growing concerns of global climate change and the impacts it will have on San Francisco's infrastructure, the City has created a Climate Adaptation Committee to research, plan, implement, and run the climate change initiative project. The purpose of this committee is to utilize science-based knowledge to advance citywide climate mitigation planning that includes:

- Generating climate impact reports and acting on them
- Vulnerability and asset mapping
- Agency implementation areas
- Responsibility and coordination refinement
- Funding and financing options
- Pre-disaster preparedness
- Post-disaster response
- Establishment and reinforcing of community partnerships

Public Utilities Commission (PUC) and Retrofits:

San Francisco has invested time and money into maintaining and retrofitting its infrastructure system. The PUC oversees several of the City's retrofit and rebuilding programs.

- CSSF has invested in \$4.6 billion in the Water System Improvement Program (WSIP) to repair, replace, and seismically upgrade the system's deteriorating pipelines, tunnels, reservoirs, pump stations, storage tanks, and dams. The program is funded by a bond measure that was approved by San Francisco voters in November 2002 and includes more than 80 projects throughout the service area – from San Francisco to the Central Valley – to be completed by midyear 2016.

More information is available at:

<http://www.sfwater.org/index.aspx?page=114>.

- CSSF has invested in updating its sewer system through the Sewer System Improvement Program (SSIP). This process has been based on 7 years of master plan writing and public input and is designed to address the following challenges:
  - Aging infrastructure and poor condition of existing facilities
  - Seismic deficiencies and lack of structural integrity

- Limited operating flexibility and lack of redundancy
- An ongoing need to protect the environment and public health, meet regulatory challenges, and conserve resources

More information is available at:

<http://www.sfwater.org/index.aspx?page=116>.

Energy Resilience:

San Francisco has been a global leader in energy resilience since 2004, when the City began working aggressively to cut its greenhouse gas emissions to 20% below 1990 levels with an ultimate goal of 80% below 1990 levels by 2050. The City has already converted a great deal of its transportation vehicles to zero emissions and plans to have the entire fleet be zero emissions by 2020, as well as have the City’s grids powered 100% by clean renewable energy.

World Environment Day and the Urban Environmental Accords:

In 2005, the City and County of San Francisco, led by former Mayor Gavin Newsom, hosted World Environment Day and initiated a campaign by entering into the Urban Environmental Accords with 50 of the largest and most visionary cities in the world. The Accords address seven environmental areas common to all of the world’s large cities: water, energy, waste, urban design, transportation, urban nature, and environmental health. The Accords work to establish issues of sustainability and environmental risk reduction as priorities in the legislative agenda.

More information is available at:

[http://www.citymayors.com/environment/environment\\_day.html](http://www.citymayors.com/environment/environment_day.html).

NFIP:

San Francisco participates in the US National Flood Insurance Program. As a member of this program, San Francisco is required to adopt and enforce flood plain management ordinances.

**Essential (5)**

*Assess the safety of all schools and health facilities and upgrade as necessary.*

CCSF has strict principles around the safety of health facilities and schools. The City actively assesses the risks that buildings face and continually upgrades them to meet requirements.

The ongoing planning and function of this process ensures that CCSF has achieved a score of 3.

Schools:

San Francisco enforces the use of the Field Act, which requires that all public schools be evaluated for structural integrity and building safety. The building

designs, in turn, are based on high-level building standards and designers and workers are held to exceptionally stringent standards in the construction and retrofitting of the buildings.

Health Facilities:

CCSF participates in, and adheres to the California Hospital Seismic Safety Law run by the Office of Statewide Health Planning and Development. The program requires that all hospitals be built or retrofitted to standards that make them earthquake resilient and capable of resuming services immediately following seismic activity. CCSF is also utilizing bonds to rebuild its primary hospital in line with several of its capital planning goals around seismic safety.

**Essential (6)**

*Apply and enforce realistic, risk-compliant building regulations and land use planning principles. Identify safe land for low-income citizens and develop upgrading of informal settlements, wherever feasible.*

The nature of high priority risks in CCSF has spurred the ongoing creation and enforcement of realistic risk compliant building regulations and land use planning principles. The City has an exceptionally dense population and does not specifically identify safe land use for low-income citizens but instead analyzes the safety of land use on a citywide basis.

CCSF's advanced and regularly updated planning principles give it an achievement score of 3.

Planning Principles:

CCSF is using well developed plans and maps to adopt smart development codes. These codes are based on United States Geological Survey (USGS) maps and emergency and hazard plans as well as the National Flood Insurance Program (NFIP). The City views all development in the same manner and applies the same principles for low-income citizens as it does for the rest of the population.

Department of Building Inspection(DBI) – Current standards:

San Francisco's Department of Building Inspection develops and implements building codes for the City. These building codes utilize the most up to date information on seismic risk and are updated on a regular basis to so that best practices are used to ensure the City's building stock is seismically safe.

More information is available at: <http://www.sfdbi.org/>.

**Essential (7)**

*Ensure educational programs and trainings on disaster risk reduction are in place in schools and local communities.*

CCSF works to ensure that a broad set of educational programs are in place in the

community. The City recognizes that no single avenue of education will reach the entire population, so it creates a suite of innovative and creative programs to reach the broadest audience possible.

CCSF's wide array of educational programs and applications helps it maintain an achievement score of 3.

Neighborhood Emergency Response Team (NERT):

The NERT program works to provide disaster response training to local communities and their members. The NERT program is also in the process of expanding its curriculum to local schools.

More information is available at: <http://sf-fire.org/index.aspx?page=859>.

SF Heroes:

SF\_Heroes is a mobile application that allows users to store emergency information, track their preparedness progress, and test their knowledge on various disaster and emergency related quizzes, all the while earning points for their accomplishments.

More information is available at: <http://sfheroes.com/>.

72hours.org:

CCSF's premier education and online learning tool is 72hours.org. This site details how to build an emergency kit, how to create an emergency plan, and what to do in the event of various types of disasters; from a power outage to an earthquake.

More information is available at: <http://72hours.org/>.

The Great California Shakeout:

The Great California Shakeout is a statewide earthquake drill in which every citizen, business, school, and government office is asked to practice earthquake safety. San Francisco focuses on getting as many participants as possible to take part in this Drop, Cover, and Hold On drill. The City also conducts participation analyses to identify performance gaps. The City routinely has more than 330,000 participants with nearly every school and college taking part.

More information is available at: <http://shakeout.org/>.

ResilientVille:

ResilientVille is a tabletop exercise developed to help teach individual stakeholders and groups about the benefits of local level problem solving through the application of two unique scenarios. The goal of the exercise is to demonstrate that the same skills required to work collectively to solve local level problems can be applied to the challenges that communities may face in an emergency. Ultimately, the aim is to achieve an increase in resilience and recovery capacity.

**Essential (8)**

*Protect ecosystems and natural buffers to mitigate floods, storm surges and other hazards to which your city may be vulnerable. Adapt to climate change by building on good risk reduction practices.*

CCSF works to protect its limited natural ecosystems, primarily along the coastline, to mitigate the effects of flood and storm surge. The City is also advancing programs and projects to combat the effects of global climate change and sea level rise.

CCSF is currently in the process of developing much of its adaptation programs so it receives an achievement score of 2.

City Adaptation Models:

CCSF is adopting models to confront climate change that both reinforce the City’s resilience and work to protect natural ecosystems and buffers. The City understands the importance of natural barriers that protect it and several components of its critical infrastructure.

Beach Restoration and Natural Buffer Protection:

San Francisco is actively trying to protect two of its beaches from sea level rise and the related erosion effects. At two beaches, sea walls are being constructed to protect roads and sand dunes are being restored to protect natural buffers.

- The City is working with the San Francisco Planning and Urban Research Association (SPUR) to protect the environment of the Ocean Beach area. This work has resulted in the creation of a sustainable long term plan that addresses the impacts of rising sea levels, the physical and ecological processes shaping the beach, and issues concerning integration with its natural, recreational, and urban contexts.
  - More information is available at: <http://www.spur.org/ocean-beach/about>.
  
- San Francisco supports the work of the Presidio Trust in ensuring the protection and restoration of Crissy Marsh and all of the area’s natural systems.
  - More information is available at: [http://library.presidio.gov/documents/ptip/PTMP/chapt3\\_crissyfield.pdf](http://library.presidio.gov/documents/ptip/PTMP/chapt3_crissyfield.pdf).

**Essential (9)**

*Install early warning systems and emergency management capacities in your city and hold regular public preparedness drills in which everyone participates.*

CCSF manages and operates an advanced citywide early warning system. The City also invests in regular public preparedness drills and information outreach.

The City's modern public warning system and regular public preparedness drills ensure that it receives an achievement score of 3.

Citywide Outdoor Public Warning System:

San Francisco has developed an Outdoor Public Warning System (OPWS) in an effort to increase the City's ability to communicate with the public during an emergency. The City operates 109 sirens with voice and tone capability that are strategically located in every neighborhood. The sirens are tested on a weekly basis, during which recorded announcements in English are followed by announcements in Spanish or Cantonese on selected sirens.

More information is available at: <http://www.sfdem.org/index.aspx?page=55>.

NERT Community Drills:

The Neighborhood Emergency Response Teams (NERT) performs regular drills and exercises to keep their members involved. They execute drills that are small and group based as well as citywide.

More information is available at: <http://sf-fire.org/index.aspx?page=859>.

The Great California Shakeout:

The Great California Shakeout is a statewide earthquake drill in which every citizen, business, school, and government office is asked to practice earthquake safety. San Francisco focuses on getting as many participants as possible to take part in this Drop, Cover and Hold On drill. The City also conducts participation analyses to identify performance gaps. The City routinely has more than 330,000 participants with nearly every school and college taking part.

More information is available at: <http://www.shakeout.org/>.

Major exercises and drills at DEM:

San Francisco's Department of Emergency Management regularly updates plans and holds numerous trainings and exercises. Many of these trainings and exercises are held in conjunction with non-governmental, faith-based and community-based organizations, businesses, and schools.

**Essential (10)**

*Needs-based (survivors) reconstruction*

CCSF includes the needs of survivors in its ongoing emergency plans. The City is in the process of developing plans that help to expedite the recovery process of survivors and businesses in the event of a disaster.

Although CCSF has several housing programs in place, it is in the process of improving program capacity for needs-based survivor reconstruction and so receives an achievement score of 2.

	<p><u>Mass Care, Housing and Human Services Annex:</u>  San Francisco includes in its emergency planning documents an Emergency Support Function (ESF-6) designed solely around the needs of the survivors. The City also works on plans developing both short-term and long-term housing options for recovery scenarios.</p> <p>More information is available at: <a href="http://www.sfdem.org/index.aspx?page=4">http://www.sfdem.org/index.aspx?page=4</a>.</p>	
Local institutions engaged in the campaign (in addition to the local government)	Bay Area Red Cross, SFCARD, SF Interfaith Council, SF Chamber of Commerce, Building Owners and Managers Association, SPUR, San Francisco State University, University of San Francisco, University of California San Francisco, City College of San Francisco, Salvation Army, Bay Area Council	
Achievement in all of the ten essential areas (make an estimation as follows: 1 - poor/nothing in place, 2 - some progress in place, 3 - in place well functioning, or N?A)	Essential N. 1	3
	Essential N. 2	3
	Essential N. 3	3
	Essential N. 4	3
	Essential N. 5	3
	Essential N. 6	3
	Essential N. 7	3
	Essential N. 8	2
	Essential N. 9	3
	Essential N. 10	2