

How can the Federal Government Prepare Local Communities for Natural Disasters?

Carolyn Berndt
Program Director for Sustainability
National League of Cities
berndt@nlc.org



April 1, 2015

The National League of Cities is dedicated to helping city leaders build better communities. In partnership with the 49 state municipal leagues, NLC is a resource and advocate for 19,000 cities, towns and villages, representing more than 218 million Americans.

Sustainability is a key area of focus for NLC – both within Federal Advocacy, as well on our research side where we have the NLC Sustainable Cities Institute with best practices, model policies/ordinances and research on different topics under Sustainability. (<http://www.sustainablecitiesinstitute.org/>)



Across the country local governments are seeing the devastating effects associated with a changing climate and are taking actions to build safer and stronger communities that are better prepared for extreme weather and other challenges.

Climate change will not only exacerbate existing water quality and supply issues, but also create new challenges for local governments and utilities, from sea level rise and flooding to drought.

Why are the recommendations of the President’s Climate Task Force important to cities? Because local governments are first responders—preparing in advance of emergency situations, offering immediate assistance to those in need, and coordinating recovery efforts. Cities are leading and innovating in such areas as energy efficiency, sustainable infrastructure, and water management, but need the federal government to better support these local efforts.



Houston

In terms of climate change impacts, Houston is already contending with severe heat waves, droughts, storms and floods.

The Houston area is home to 6 million residents and is projected to grow to more than 7 million by 2020.

Houston is working on a wide range of initiatives to reduce greenhouse gas emissions even as the city continues to grow.

Some of Houston's work and accomplishments to date include: largest municipal purchaser of renewable energy in the nation; third largest municipal hybrid fleet in the nation; achieved a greenhouse gas emissions reduction of 26% compared to the city's 2007 greenhouse gas emissions inventory; top 10 on the U.S. Environmental Protection Agency list of cities with the most energy efficient buildings; replaced the incandescent bulbs at all of the city's 2,450 signalized intersections with LEDs; and expanded availability of electric vehicle infrastructure and solar powered parking meters.

Earlier this year, the city launched a \$500,000 public-private partnership effort to produce a citywide bicycling plan, which builds on the city's robust bikesharing program and large network of trails. The effort is needed not just for recreation but

for mobility, particularly as younger generations seek less dependence on cars and it becomes more expensive to expand roads as Houston grows denser.

Fort Collins

The Fort Collins story is one of fire and flood. **Disaster preparedness and recovery** is centrally important to Fort Collins. The 2012 High Park Fire was a precursor to other subsequent disasters, particularly the 2013 flooding in Fort Collins, Boulder and the surrounding areas. In 2012 wildfires burned 87,000 acres, including the area right around the city's intake facility. The city was forced to evaluate some of their best practices and come up with new ways of adapting to the circumstances of living and working within a burned watershed. Since the fire, erosion, increased debris flows, and flash flooding have become more common. The fire destroyed the city's natural infiltration system. After the disaster, the city spent \$2 million build a treatment plant, which it had never needed before and which FEMA would not pay for.

The following year, the area saw a 50 year flood event that caused \$1.7 billion worth of damages, with the worse damage in Boulder and Larimer counties. In the City of Fort Collins, after the 1997 Spring Creek Flood, which was a greater than 500 year event, officials implemented mitigation techniques and policy changes which helped to minimize damage and impacts in 2013. Besides from these mitigation techniques, the city and state credit their "**peer exchange**" with Vermont (Gov. Shumlin was also on the Task Force) as helping to speed up the recovery process. It was this connecting with other communities—a state comprised largely of small towns like Colorado—that helped the state and local communities understand the recovery process.

Building off this, the notion behind a **Resilience Corps** to help build capacity is one recommendation that is important to the City of Fort Collins. On-the-ground support, technical assistance, and guidance is particularly important for smaller communities to advance climate preparedness and planning before/during/after an emergency.

Fort Collins recently adopted an aggressive Climate Action Plan aims to reduce its total greenhouse gas emissions 20 percent by 2020 and 80 percent by 2030 across all sectors relative to 2005 levels. The latter goal is a full 20 years sooner than the "80 by 50" goal [conventionally set by other leading cities](#). Fort Collins also aspires to reach carbon neutrality by 2050. While a partnership with the local utility is essential for meeting these goals, they are taking a community-wide approach...reducing GHG emissions from buildings, the electric utility, transportation and creating a zero-waste community. Financing is obviously key.

Salt Lake City

Mayor Ralph Becker was on the President's Task Force, and he is also the NLC President this year. He has been very engaged on these issues, both from a city

perspective and a national-NLC perspective.

While Salt Lake City is fortunate that they have not had a major climate-related disaster, the city has received federal support from the NOAA Regional Integrated Science Assessment Program to conduct a climate vulnerability assessment. Having access to updated information and data from the Federal government such as flood hazard maps, wildfire risk and erosion hazards has supported the city's climate adaptation decision-making. The city's continual planning will reduce risks to citizens and minimize the costs of recovery when a severe weather event does occur. The recommendations around **pre-disaster training on Federal response and recovery programs for elected officials and community leaders** will also enhance the cities' current emergency planning efforts.

SLC also identified the value of applying the **true economic costs of future climate risks** as essential to how they make future decisions. One example of this is their work with the State of Utah and regional energy providers to evaluate appropriate costs and account for benefits of renewable energy. Long-term economic, environmental and societal benefits of these investments should be considered, not simply short-term decisions that often undervalue climate resilient strategies.

SLC identified the Task Force recommendation of **requiring federal grant programs to address potential climate impacts, which will provide better long-term considerations of public health, safety, and financial risks for communities.**

SLC is focusing their sustainability efforts to ensuring future clean and sufficient water supplies, and investing in renewable and clean energy systems and alternative transportation systems. These investments will not only make the city more resilient; they will also improve citizens' health through improved air quality and a more walkable community.

The city's [Sustainable Salt Lake – Plan 2015](#) addresses key areas for action such as air and climate, energy, transportation, water, housing, and food and nutrition among others. The city has established targets under each item and over 100 metrics for measuring success. An online [city dashboard](#) allows the public to track the city's progress toward meeting its goals. Other sustainability initiatives in Salt Lake City include a [no idling ordinance](#) and a recent executive order to [increase energy efficiency in city buildings](#).



PACE programs provides a means of financing energy efficiency upgrades, renewable energy installations and weatherization improvements for homes and businesses through a voluntary property assessment.

Residential PACE is in somewhat of a holding pattern, but commercial PACE projects are taking off.

There are 13 states with active commercial programs: AR, CA, CT, DC, FL, GA, MI, MN, MO, NY, OH, UT, and WI.

Residential PACE is flourishing in CA and is offered in GA, FL, MO, and NY.

In California, there is a new pilot program that will open the door to PACE financing for multifamily housing properties that receive HUD assistance or are backed by HUD insurance. The pilot will use criteria developed by HUD to establish eligibility among HUD-assisted and -insured housing in California. Prior to this program, HUD backed housing projects were not approved by HUD for PACE financing. This pilot, if successful, can have positive implications for the national PACE market.

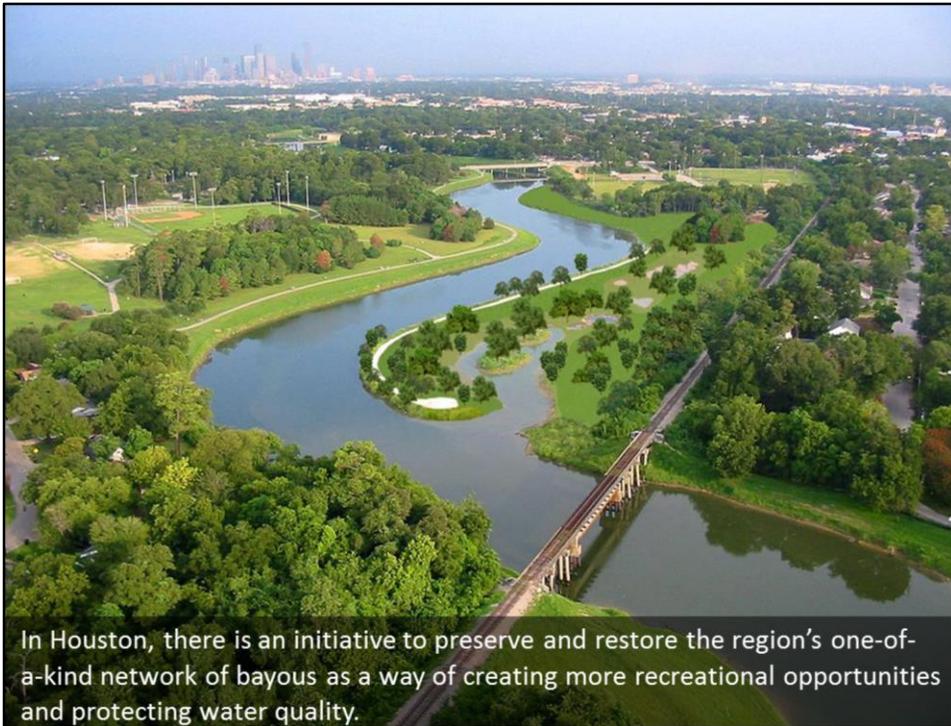
Residential PACE programs are launching or in the works throughout California. The state has set up a loss reserve fund for residential properties to cover any foreclosures.



Chicago, Illinois leads the nation in green roofs. The City also established the Chicago Trees Initiative to mitigate urban heat islands and manage stormwater and has a progressive Green Alley program.

From a presentation at NLC's recent Midwest Regional Convening on Climate Resilience

There have been increased efforts to establish permeable surface areas, green roofs, and urban tree canopies across the city. The Chicago Trees Initiative aims to mitigate the effects of increasing temperatures and stormwater management problems by increasing canopy cover in the city. Planting lists were updated to include the foliage and trees that will be more likely to survive in a warmer climate; for example, white oak, the state tree of Illinois, is no longer on the city's approved urban list. Instead, tree species from the south, such as swamp oaks, which are acclimated to warmer climates, have been added to the list. In addition, the Green Urban Design plan has prioritized efforts to increase permeable surfaces around the city through the Green Alley Program. This program has both adaptation (reduced stormwater runoff, temperature regulation) and mitigation (increased energy efficiency, reduced energy costs) benefits.



In Houston, there is an initiative to preserve and restore the region's one-of-a-kind network of bayous as a way of creating more recreational opportunities and protecting water quality.

Image is from NLC's 2011 Building Cities, Building Futures infrastructure tour.

Bayou Greenways Initiative: a \$220 million public-private partnership that will add 1500 acres of new and equitably distributed green spaces. It will also complete 150 miles of continuous all-weather hike and bike trails, adding to Houston's 540 miles of existing bike trails.

By acquiring and improving land adjacent to ten major bayous, the city will establish an interconnected system of parks and trails linking people, places and green space, while enhancing air and water quality, reducing flooding, and stimulating economic development.

The city conducted a benefits analysis in 2011, and while not all benefits can be measured in dollar terms (changing the image of Houston and attracting and retaining the "knowledge worker"), the report estimated total measurable annual benefits of Houston Bayou Greenways are \$117.1 million.

Eugene, Oregon has been working to mitigate flooding, conserve water, remove essential services from the flood zone, update the Natural Hazard Mitigation Plan to incorporate climate risks, conduct a vulnerability assessment and offer residents climate-adapted tree species for planting on the street and in the right-of-way.



Forest health and flood mitigation are important concerns for Eugene. Recent forest fires and flooding events have led the city to pursue efforts aimed at:

- Increasing water conservation
- Removing essential services from the flood zone
- Increase energy efficiency
- Enhancing food security
- Updating Natural Hazard Mitigation Plan to incorporate climate risks such as flood, fire, and heat
- Conducting a vulnerability assessment
- Offering residents climate-adapted tree species for planting on streets and in the right-of-way



This December, the UN Framework Convention on Climate Change (UNFCCC) will meet in Paris for [COP-21](#) (the 21st session of the Conference of the Parties to the UNFCCC) in hopes of negotiating a new, international agreement on greenhouse gas emissions. Cities and towns will continue to be at the center of any effort to mitigate or adapt to the challenges posed by climate change.



The Administration has been taking positive steps toward implementing the recommendations of the President’s Task Force report, and we’re hopeful to see more action in the remaining two years of this Administration. Congress can take some important actions as well. We must have national policies, such as long term extension of investment and production tax credits, that will really drive large-scale change and local success.

1. Protect the status of tax-exempt municipal bonds. As the number one tool for financing infrastructure projects in this country, if the federal income tax exemption for municipal bonds is eliminated or limited, local governments will pay more to finance projects, leading to less infrastructure investment, fewer jobs, and greater burdens on those who will have to pay higher taxes and fees. Local governments need more tools and financing mechanisms, not less, and we need to be smarter with what we have, particularly when it comes to improving our infrastructure and protecting our communities from the impacts of climate change.
2. Portman-Sheehan: While a scaled back version passed the House last week, which included incentives and provisions to support energy efficiency in commercial buildings, NLC supports moving forward with a comprehensive bill – and specifically with the SAVE Act provision which will provide lenders and homeowners with more flexible federal mortgage underwriting rules that would

include a home's expected energy cost savings when determining the value and affordability of the home.

3. Allow residential PACE programs to move forward; pass a long-term extension of the investment and production tax credits for renewable energy; pass a renewable portfolio standard to increase the share of electricity from renewable sources.

Importantly, local governments need effective partnerships with their state government and the federal government to achieve as they work toward building community resilience.

Taking action now to adapt to a changing environment and create community resilience will help save lives, strengthen local economies, save taxpayer dollars and build preparedness for future events.

