



## Adapt LA - Preparing for Climate Change Fact Sheet



*Over 650 acres of new parkland has been added since 2005.*

### Los Angeles and Climate Change

The world's climate is changing at an unprecedented pace. This is the clear consensus of the United Nations' leading climate scientists. Indeed, many parts of the world are already experiencing the impact of rising temperatures.

Climate change is a global phenomenon, and its effects do not stop at national, state or local borders. Cities must be on the frontlines of confronting and adapting to our changing environment.

In responding to climate change, cities face a twofold challenge. First, they must **mitigate** their impact on the global environment by lowering emissions, conserving energy and enhancing sustainability. At the same time, cities must also prepare to **adapt** to changes in the climate that are already underway and cannot be reversed.

To meet the challenge of climate change, the Villaraigosa administration began developing and implementing comprehensive mitigation and adaptation strategies in 2005. These strategies are guided by a rigorous, science-based approach to ensure that elected officials, government agencies, and the public have the best available data to guide their decisions and inform appropriate policies and programs.

Climate change is real, and the time to prepare is now. With good data driving good policies, we can craft innovative solutions that will preserve our environment and ensure our quality of life in Los Angeles for the next generation.

<sup>1</sup>2007 Fourth Assessment Report of the UN Intergovernmental Panel on Climate Change.

# Climate Change in Los Angeles

## Building on our Success

Since the release of the 2007 GreenLA Plan, Los Angeles has made significant progress toward **mitigating**<sup>1</sup> climate change with bold and innovative actions.

Los Angeles reached its goal of deriving 20 percent of its energy from renewable sources by 2010, has reduced water consumption and increased energy efficiency to record levels, cut pollution at the Port of Los Angeles, expanded public transportation, increased the City's tree canopy, set sweeping green building standards, launched the largest LED street light replacement program in the world, and switched to alternative fuels for the City's fleet. We've seen the conversion of all MTA buses to compressed natural gas, created more than 650 acres of new open space, and reduced auto emissions through improved congestion management by synchronizing the signals of all of the city's major intersections.

## Making Green Choices Easier

Los Angeles continues to spearhead efforts to further reduce its carbon footprint and has developed programs and strategies to engage Angelenos in reducing their individual carbon footprints. These include:

**Dramatically expanding bike infrastructure to promote alternative transit:**  
<http://www.bicyclela.org/>

**Feed-in-tariff programs for solar installation:**  
<http://dwpfeedintariff.com/>

**Comprehensives energy efficiency rebates**  
<http://tinyurl.com/ladwpeerebateinfo>

**Rebates to incentivize electric car ownership:**  
<http://tinyurl.com/ladwpevrebateinfo>



Photo by Scott Page

100 percent of MTA's bus fleet has been converted to clean fuel vehicles.

# Preparing Los Angeles For a Different Climate

Addressing the impacts of rising temperatures can seem daunting. Fortunately, Los Angeles has a head start.

Much of the work we have been doing to mitigate climate change will also help us to **adapt**<sup>2</sup> to it.

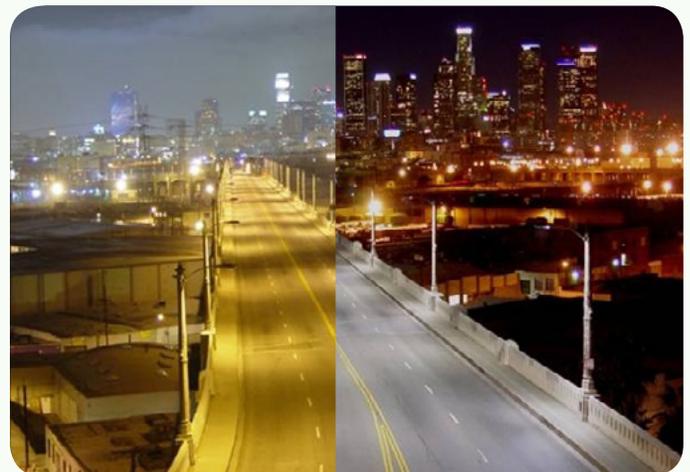
Our green building standards ensure that all new buildings will be well-protected from increasing temperatures. The City's energy efficiency programs are already helping existing buildings – including homes, businesses, and industrial centers – to lower their carbon footprint.

Trees and parks also have a role to play in preparing our city for climate change. Trees provide shade and can absorb greenhouse gases. Parks can provide much-needed refuge on hot days. Thanks to our tree planting program, we are planting trees at six times the rate of previous efforts and prioritizing areas of the city known for their lack of canopy. During the last seven years, we have added 50 new parks with a total of 650 acres, significantly increasing the availability of green public space throughout the city.

In addition to these measures, the City of Los Angeles is developing a comprehensive adaptation strategy. This strategy addresses and reduces the risks that climate change poses to public health, private and public property, and our community's quality of life. The City's adaptation strategy has four major components: evaluation; assessment; partnership; and public engagement.



Increasing LA's tree canopy improves air, water, and soil quality.



The 6th Street Bridge before and after the LED replacement program.

<sup>1</sup> **Climate mitigation** is any action taken to permanently eliminate or reduce the long-term risk and hazards of climate change to human life and property. For example, mitigation actions include increasing the tree canopy, reducing fossil fuel energy sources, and promoting alternative forms of transit such as biking.

<sup>2</sup> **Climate adaptation** refers to the ability of human beings and natural systems to adjust and adapt to a new or changing environment. For example, increasing the tree canopy and constructing more parks and open space will help reduce the heat island effect.

## I. Evaluating the Impacts of Climate Change: A Science-based Approach

Good data is a crucial ingredient in any successful adaptation strategy. We need reliable models and forecasts that will not only identify the likely effects of climate change, but also help us to develop and implement the most appropriate adaptation measures.

To this end, the City of Los Angeles has already embarked on two landmark studies designed to inform the City's adaptation strategy.

**1) Climate forecasting:** Conducted by leading scientists at the University of California, Los Angeles, this forecast was funded by the City of Los Angeles and completed in June 2012. Using a cutting-edge modeling technique, the study examines the Los Angeles regional climate between 2041 and 2060 at a neighborhood scale model (2 km).

The study provides detailed data on the effects of greenhouse gas emissions on the future climate of Los Angeles. The results underscore that in 30 years the Los Angeles region's summer season will be longer and hotter, with average temperature increases of 4° - 5°F in inland areas. Hot-weather days over 95°F will triple in downtown Los Angeles and quadruple in the San Fernando Valley. Additional climate change studies will be released in 2012 that include forecasts of future precipitation, Santa Ana Winds, coastal fog, and soil moisture. For more info, visit [www.c-change.la](http://www.c-change.la).

**2) Sea Level Rise:** In the Fall of 2011, the City of Los Angeles partnered with USC Sea Grant, International Council for Local Environmental Initiatives (ICLEI), and the Scripps Institute of Oceanography on the development of a sea level rise strategy for the Los Angeles region.

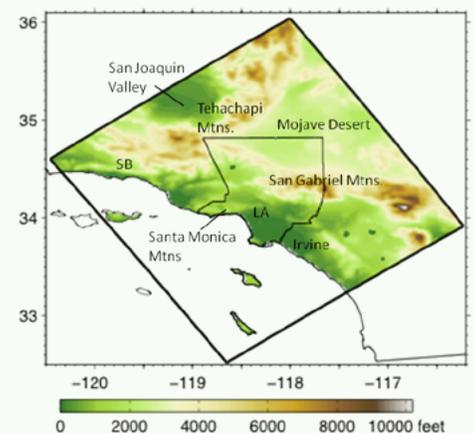
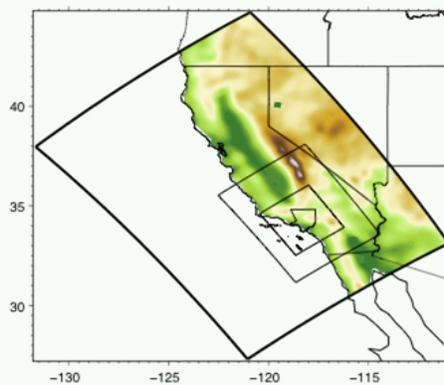
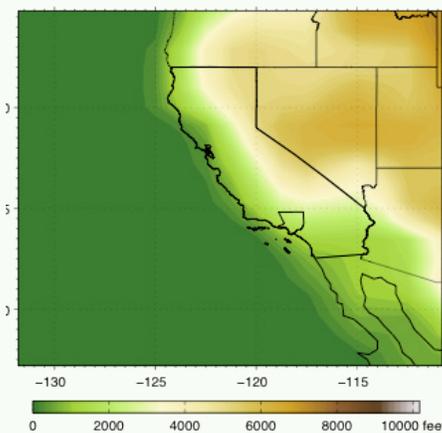
**Next step:** The Mayor's Office will instruct City departments to evaluate the findings of the UCLA study on **temperature**, and the USC, ICLEI, and Scripps Institute of Oceanography study on **sea level rise**.

## II. Assessing Vulnerability And Risks Of City Infrastructure And Assets

Climate change impacts are not and will not be experienced equally across the city. With well designed studies and reliable data, the City can conduct area-specific **vulnerability assessments**<sup>3</sup> and evaluate the risks for specific city facilities and infrastructure.

Based upon data from the UCLA study, the City will begin to conduct vulnerability and **risk assessments**<sup>4</sup> on city assets.

**Next step:** The Mayor's Office will convene a workgroup of city departments to develop Citywide Vulnerability and Risk Assessments. It is expected that the assessment will be completed by early 2013.



Above: These topographical maps show the difference in detail between the global model (left) and the local model (right).

## III. Promoting Partnerships By Working Regionally and Across Agencies

Because the effects of climate change will not stop at the Los Angeles City-line, effective adaptation planning will require coordination with Los Angeles County and its cities, private industry, and the numerous state and federal agencies that have influence over the region. Through proactive coordination, regional stakeholders can capitalize on efficiencies, shared best practices and the sharing of responsibilities.

The City of Los Angeles will use an already existing structure to promote regional partnerships: the Los Angeles Regional Collaborative (LARC). Housed at UCLA's Institute of the Environment, LARC is one of the nation's first regional partnerships to involve local governments, university researchers and community leaders in the crucial task of preparing for a new climate reality.

The effort brings together climate change planners from jurisdictions that include the Cities of Los Angeles, Long Beach and Santa Monica, the South Coast Air Quality Management District, South Bay and Westside Cities Councils of Government, Metro, ICLEI, the Los Angeles Chapter of the US Green Building Council and others to discuss mutual issues and share solutions.

**Next step:** The Mayor's Office, in coordination with City departments and the Los Angeles Regional Collaborative (LARC), will develop a regional Climate Adaptation Strategy that is anticipated to be completed by Spring 2013.

## IV. Increasing Public Awareness and Input

Angelenos have a long history of innovative environmental stewardship. We understand that our quality of life critically depends on a sustainable environment.

Together, Angelenos have achieved record levels of energy efficiency and water conservation. We have made our homes and buildings greener. Today, even though our environmental challenges are more global in nature, there is a tremendous amount we can - and must - do locally.

As the City of Los Angeles moves to adapt to climate impacts, we will continue to call on the leadership and stewardship of our residents and businesses to not only reduce their carbon footprint, but to also find new innovative ways to prepare for and adjust to the lasting effects of climate change.

**Next step:** The Mayor's Office, along with appropriate City departments, will put an input process in place to ensure adequate public participation in the development of the regional adaptation strategy for heat and sea level rise.

<sup>3</sup> A **vulnerability assessment** identifies the impacts of climate change and analyzes which community assets and populations would be exposed to these impacts. For example, in evaluating sea level rise, a vulnerability assessment would identify what areas may become inundated by rising seas.

<sup>4</sup> A **risk assessment** catalogs the adverse effects of climate change and determines the likelihood that these adverse effects will take place. For example, a sea level rise risk assessment would calculate the risk of damage associated with this increase in sea level to community assets and populations.

## Potential Actions for Climate Adaptation

As the City develops its adaptation strategy, there are already some common sense measures that can be taken to address the impacts of high temperature and a diminished water supply. Many of the following measures build on actions already taken by the City, including our high green building standards, mandatory water conservation, and new solar feed-in tariff program.

**Action:** reduce the urban heat island effect by:

- Adjusting building codes to favor “green” and “cool” roofs and cool pavements for new construction;
- Increasing tree canopy in neighborhoods with higher temperatures;
- Continuing to build new parks and increase open space.

**Action:** Ensure an adequate number of cooling centers in every neighborhood, including possible partnerships with schools to provide swimming pools and parks to the public.

**Action:** Provide incentives for solar rooftop installations to provide insulation and additional power supply;

**Action:** Decrease demand for power on hot days by:

- Promoting customer rebates for energy efficiency.
- Making all municipal buildings energy efficient.

**Action:** Ensure water conservation by:

- Reducing outdoor water use by encouraging the use of climate-appropriate landscaping;
- Continuing aggressive rebates for indoor water conservation tools such as low-flow toilets, showerheads, and faucets.
- Expand LADWP's stormwater capture programs.



*The Villaraigosa administration is committed to supporting and promoting alternative transit.*



*Building new parks and increasing open space will help reduce the heat island effect caused by buildings and streets.*



*Making municipal buildings energy efficient will reduce the demand for power on hot days and save taxpayer dollars.*



*The solar feed-in-tariff program encourages Angelenos to harvest sunshine.*

### For More Information Contact

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