Climate-Smart Community Profile: Houston, TX

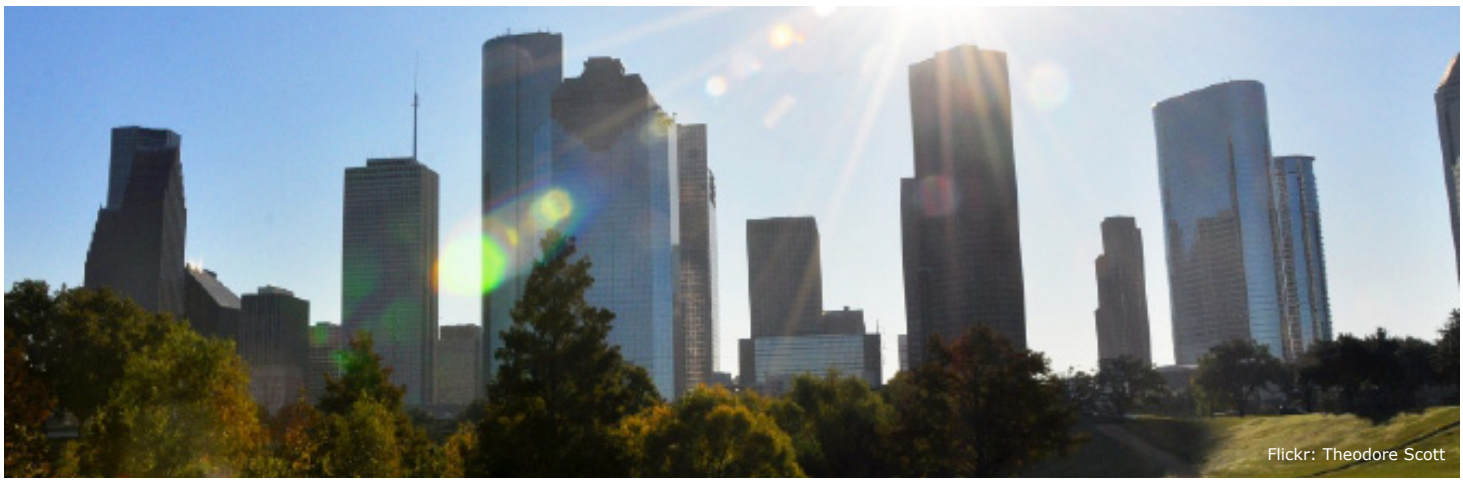

Flickr: araza123

Located near the head of Galveston Bay, 50 miles from the Gulf of Mexico, Houston is the largest city in Texas and the fifth largest in the US. Its population of 2 million is sustained primarily by a strong industrial bases in manufacturing, energy, aeronautics, and transportation. Houston experiences a humid subtropical climate, averaging 100 days per year over 90 degrees Fahrenheit, heightened by the pervasive humidity. The city is built on a temperate grassland and marsh ecosystem.

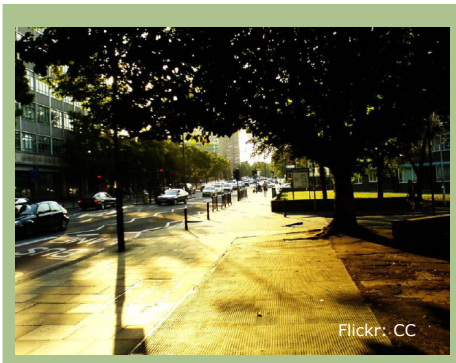
Cities and towns across the United States are beginning preparations to cope with the impacts of climate change, a process known as climate change adaptation. Houston is using a variety of nature-based approaches to protect people and property that also confer adaptation value for wildlife and habitat areas. Houston is preparing for **dangerously high temperatures, drought, flooding, increasingly powerful hurricanes, and more**.

Climate Planning Activities

- In 2006, Houston joined **ICLEI: Local Goverments for Sustainability**. ICLEI works to form "a committed network of local governments from across the country and around the world, learning from one another and sharing resources to accelerate success."
- Houston is also a member of c40 Climate Leadership Group, a member network committed to implementing meaningful and sustainable climate-related actions locally that will help address climate change globally.
- In 2008, the Houston-Galveston Area Council (H-GAC) put forth the **Foresight Panel on Environmental Effects Report**. The Effects Report outlined the potential effects of climate change and provided a set of adaptation recommendtions for the region.
- The Bush School of Government and Texass A&M partnered in 2009 to release a **follow up to the Effects Report**. The report sought to expand on some of the issues adressed by the H-GAC, to make more specific adaptation recommendations, and to identify how the the Effects Report had beed responded to by the region in the year since its release.


Flickr: Theodore Scott

Implementation of Adaptation Activities



Urban Heat Island Effect (Effects Report)

- High percentages of paved surfaces cause urban areas to absorb and retain more heat, increasing temperatures of the city and surrounding areas in what is known as the "urban heat island effect. These changes create problems for wildlife both wildlife and people living in cities.
- The H-GAC has suggested planting trees and constructing green roofs across the city to provide shade, lower temperatures, and wildlife habitat.

Extreme Weather and Flooding (Effects Report)

- Climate change is increasing storm frequency and intensity, putting more stress on already outdated stormwater management infrastructure.
- The H-GAC is recommending that local governments implement measures to protect and restore wetlands and riparian areas to act as natural flood deterrents. In addition to helping absorb stormwater, these natural areas provide critical wildlife habitat and ecosystem services like nutrient cycling and water filtration.

Sea-Level Rise (Effects Report)

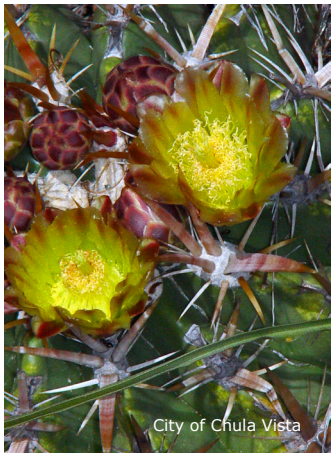
- As sea-levels rise due to melting of polar ice caps, coastlines will be under constant pressure of flooding from higher tides and stronger storms.
- H-GAC recommends that local authorities prohibit new building and construction in coastal areas subject to future flooding. By leaving these areas undeveloped and in their natural states, shorelines would be better protected from rising tides, wildlife would have more available habitat, and valuable property and infastructure would remains out of danger.

What's helping Houston?

- Strong assesment of climate impacts on the region from H-GAC
- Excellent, independent identification of next steps from the Texas A&M - Bush School partnership

What's holding Houston back?

- Lack of authority: H-GAC holds no legislative power, and instead can only provide recommendations to local governments. In order to see action on any of these strategies, their must be buy-in from relevent city and county officials.



For more information, please contact:

Kara Reeve
Climate Smart Communities
National Wildlife Federation
www.nwf.org/climate-smart
202.797.6653
reevek@nwf.org

Houston-Gavelston Area Council
P.O. Box 22777
Houston, TX 77227
http://www.h-gac.com/home/default.aspx
713.627.3200