

Climate-Smart Community Profile: Philadelphia



With a population of more than 1.5 million, Philadelphia is the largest city in Pennsylvania and the fifth largest in the US. Located immediately across the Delaware River from New Jersey, Philadelphia's economy was historically industrial but has since become geared towards information and service-based business including finance and health education/research. The city also draws a heavy tourist population due to its role during the American Revolution. Philadelphia sits at the center of the Delaware valley, and experiences a humid subtropical climate with hot, muggy summers, mild winters and falls, and cold winters.

Cities and towns across the United States are preparing for and responding to the impacts of climate change, a process known as climate change adaptation. Philadelphia is using a variety of nature-based approaches to protect people and property that also confer adaptation value for wildlife and habitat areas. Philadelphia is particularly concerned with preparations for **stormwater flooding, extreme heat, wetland degradation, and habitat loss.**

Climate Planning Activities

- 2007: City of Philadelphia Sustainability Working Group released a **Local Action Plan for Climate Change** outlining strategies to reduce the city's greenhouse gas emissions by 11.6% by 2010. The Plan included strategies such as purchasing renewable energy, increasing building energy efficiency, and maintaining open spaces and urban tree canopy. The Plan also called for the City to establish the Office of Sustainability and Environment.
- 2009: The Mayor released **Greenworks Philadelphia** as a comprehensive plan for making the Philadelphia the "greenest city in America." The plan supplemented the Local Action Plan with ambitious goals to reduce greenhouse gas emissions, protect and expand open spaces, retrofit buildings and infrastructure, and more. **Progress reports** on the goals and strategies are released each year.
- 2009: The Water Department introduced **Green City, Clean Waters** as a 25-year plan to protect and enhance watersheds and the city's water supply by managing stormwater with green infrastructure. The plan (which was designed to address some of the goals set in Greenworks Philadelphia) included measures to install rain barrels, green roofs, pervious pavement, rain gardens and more. The plan was officially supported by the Environmental Protection Agency which is collaborating with Philadelphia on its implementation.



Implementation of Adaptation Activities

Stormwater (Green City, Clean Waters)

- Climate change is increasing storm frequency and intensity, putting more stress on already outdated infrastructure.
- Along with bigger pipes and more pervious surfaces, the city has recommended use of green roofs, rain gardens, and urban tree planting to absorb and purify stormwater via natural processes.
- These measures will help offset the effects of increased rain in Philadelphia while providing new and improved habitat for wildlife.



Urban Heat Island Effect (Greenworks)

- 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 (UHIE). These changes create problems for wildlife both wildlife and people living in cities.
- Philadelphia is using green roofs and tree canopy expansion to provide more shade and lower temperatures. The City hopes to reach 30% tree canopy coverage in all neighborhoods. The City is also expanding open space to help offset the UHIE and provide increased habitat for wildlife.



Watershed Degradation (Green City, Clean Waters)

- The Delaware River watershed is experiencing higher temperatures, more erosion from storm events, and saltwater intrusion from sea-level rise. These changes threaten the watershed's ability to handle increases in stormwater, to cycle nutrients, and to provide habitat.
- Philadelphia is protecting source waters, revamping critical infrastructure, restoring riparian corridors, and reducing pollution. Philadelphia is even tearing down dams and "daylighting" rivers (removing infrastructure that severely alters waterways) to allow them to return to their natural state.



What's helping Philadelphia?

- Excellent leadership from the Mayor and City Council
- Thorough and ambitious planning from multiple city departments, with strong coordination and sharing of information
- In-depth report on climate change and its potential effects
- Yearly progress reports on Greenworks Philadelphia

What's holding Philadelphia back?

- Uncertainty of how climate change will impact City departmental operations and what costs will be incurred
- Conflicting policies at local, state, and federal levels create unnecessary roadblocks
- Perception that costs for adaptation projects are high, which is not necessarily accurate

