Municipalities Must Consider Climate Change Impacts in Comprehensive Planning Process

By Nate Kelly / Horsley Witten Group

March 17, 2025

As an increasing number of cities and towns undertake the task of long-term planning, it's easy for us to be distracted by current political shifts or worse, to second guess our priorities. For close to two decades, issues related to climate change have slowly but surely moved from the fringes of public discussion to more mainstream consideration.

Advocates and policymakers continued to push for greater awareness while emerging data built an undeniable case for resiliency planning, emergency preparedness, walkable communities, and renewable energy. Unfortunately, greater acceptance of the need to address climate change also came at the expense of millions of people who have experienced the trauma of climate-related natural disasters in recent years.

In recent weeks, however, pushback on these issues has crystalized in a different policy landscape, leaving many communities uncertain about if and how to prioritize planning for these challenges.

In times of uncertainty, it is important to step back and reflect on what we know. Whether from a scientific journal or the evening news, the data and current events are aligned in a common message. Climate change is real, it's accelerating, and we need to be prepared. Rising sea levels, more frequent extreme weather events, and the degradation of natural ecosystems require a new approach that integrates climate

resiliency into every aspect of planning for urban, suburban, and rural communities.

This shift is unprecedented in scope, with municipal leaders across the country facing the need to address not only traditional planning concerns but also those directly related to environmental sustainability. For many communities, this is new territory with a steep but urgent learning curve.

For local planners, residents, and business owners, this means seriously considering future environmental impacts in all aspects of planning is essential. Whether addressing the vulnerability of flood-prone areas, enhancing stormwater systems, planning for increasing heat, or redesigning transportation networks, comprehensive plans are increasingly shaped by the need for climate change resilience. This approach provides any municipality with an opportunity to consider how climate change affects every aspect of municipal operations, shaping how cities and towns will evolve and grow in the coming decades.

As witnessed by the recent devastation wrought by hurricanes Helene and Milton, one of the critical components in modern community planning is safeguarding flood-prone areas. With climate change exacerbating flood risks, efforts to restore natural floodplains and wetlands, which store water during flood events, have gained momentum. Projects that stabilize stream banks, reconnect rivers to floodplains, and remove man-made barriers such as obsolete dams are being integrated into comprehensive planning to enhance the resilience of ecosystems and adjacent neighborhoods.

Coastal cities are increasingly vulnerable to the sustained threat of rising sea levels, coastal storms, and erosion. Shoreline stabilization projects, including the use of "living shorelines" and dune restoration help protect infrastructure while improving the health of natural ecosystems. These initiatives are increasingly included in hazard mitigation and climate adaptation strategies for coastal communities. They also set

the stage for a more systemic perspective within the comprehensive plan.

As extreme rainfall events become more common, outdated infrastructure can no longer manage the volume of water. Mountain communities are especially vulnerable, evidenced by the catastrophic damage reported in western North Carolina following Hurricane Helene. A renewed focus on stormwater management is essential to any municipal plan, as communities invest in green stormwater infrastructure systems, such as bioretention and floodable parks, to capture and filter stormwater, easing the burden on conventional drainage systems. This not only mitigates flood risks but also improves water quality by reducing pollutants that would otherwise flow into rivers and streams.

The integration of environmental resilience into municipal planning also extends to transportation networks, housing developments, and public spaces, all of which are being reimagined to accommodate new environmental realities. Urban planners are prioritizing transit-based developments to reduce carbon emissions, as they create more walkable communities. Housing is another area where environmental concerns intersect with environmental imperatives. Many cities and towns are revisiting zoning laws to encourage development in areas less vulnerable to climate-related risks. The relationship between land use, transportation, and environmental impact is central to new planning strategies, ensuring cities remain both livable and sustainable.

The unprecedented need to integrate environmental priorities in urban and regional planning also reflects the growing recognition of the interconnectedness of ecosystems with the daily life of residents. Open spaces, parks, and natural habitats provide air and water filtration and relief from extreme heat. The ill effects of urban heat islands are reduced in the summer with resilient landscapes and shade, while orienting construction for optimal solar exposure reduces energy costs in the winter. Recognizing this, urban areas in particular are prioritizing the restoration and

expansion of green spaces in their comprehensive plans, linking them to public health, economic vitality, and climate resilience.

The blending of comprehensive planning with climate planning represents a holistic approach that moves beyond the outdated and ineffective practice of relying on isolated infrastructure projects. By incorporating climate resilience into all aspects of planning — from water management to transportation and housing — municipalities can build cities that are better prepared to withstand our most pressing future environmental challenges. Now is not the time to move away from this focus, this is what we know.

Nate Kelly is president of the Horsley Witten Group (https://horsleywitten.com/), an engineering, design, and environmental consulting firm seeking sustainable environmental solutions.

The views expressed in this opinion piece do not reflect those of ecoRI News or its board of directors. ecoRI News publishes a diversity of opinions from the community. To submit an opinion piece, visit our opinion submission page, which includes guidelines and instructions for sending in your submission. (https://ad.broadstreetads.com/click/823094/c546017/z152035?)

Categories

OPINION