

**Low-Carbon, Climate Resilience Opportunities in Small Limited Resource Cities  
A Journey to Resilience in Northampton, Massachusetts**

## Abstract

As many communities pursue low-carbon, climate-resilient futures, medium to large cities have often taken the lead, supported by organizations like the C40 Network, Bloomberg Philanthropies, and the former Rockefeller 100 Resilient Cities initiative. However, smaller communities, especially those with median or below-median income levels, frequently lack access to these resources and opportunities. This gap is significant, as more Americans reside in smaller cities and communities than in large cities. This report examines the unique opportunities and challenges faced by smaller cities, particularly those with limited financial resources and specialized staff.

This case study explores how Northampton, Massachusetts—a small city with a population of just under 30,000—has navigated these challenges by setting ambitious climate targets, aligning its planning and capital improvement efforts with sustainability and resilience goals, and establishing a dedicated climate action department. Northampton's achievements, which include the highest score in the former Massachusetts Commonwealth Capital sustainability program, the first 5-STAR rating in the Sustainability Tools for Assessing and Rating Communities, and a LEED for Cities Gold certification, provide valuable insights into how small, median-income cities can make meaningful progress on climate change. The lessons learned from Northampton's successes and setbacks offer actionable guidance for other smaller communities aiming to address climate resilience and sustainability.

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## **Introduction**

Small, resource-restricted cities across the United States face unique challenges in striving for climate resilience and sustainability. Limited capacity and governmental support, challenges to building community and political consensus, and insufficient access to funding and financing often hinder their ability to implement large-scale climate-action initiatives. At the same time, these cities are increasingly vulnerable to climate impacts such as extreme weather, flooding, increased risk of fire and disruption to ecosystems, making resilience efforts crucial for protecting public health, infrastructure, and local economies. Despite these constraints, small cities have significant opportunities to innovate with localized, cost-effective solutions that can deliver co-benefits to polarized populations. It is vital for these cities to overcome financial and logistical barriers to build resilience, as their success can serve as a model for others and contribute to broader climate goals.

This case study focuses on the City of Northampton, Massachusetts' strategic realignment around sustainability and climate between 2005-2024. It reveals lessons and salient challenges related to municipal sustainability efforts and climate-action leadership. Northampton brought a vision-driven focus and long-term commitment, built community consensus, institutionalized climate action in multiple departments and in the capital improvement and operating budget process, emphasized both climate resilience and adaptation, and brought climate into many policy considerations. In spite of this focus, budget and political constraints and competing priorities always limit the actions agenda.

## Summary

### Background

Northampton, Massachusetts, is a small city (29,370 people). It has a median income of about 75% of the state with significant social needs (e.g., people experiencing houselessness or whose housing creates significant cost-burdened households), and, as in all communities, competition for limited resources. Northampton is too small to be eligible for assistance on sustainability from some of the leading non-governmental funders (e.g., the C40 Network, the Bloomberg Philanthropies, and the former Rockefeller 100 Resilient Cities) and is challenged to attract unique financing approaches (e.g., social impact investors and green bonds).

Northampton has long tried to punch above its weight to find scrappy and low budget approaches to social, environmental, land use challenges. It took action before many of its peer communities on many of the issues of the day. The combination of leadership and risk-taking from political, community, and appointed officials, dedicated community partners and organizations, and the ability to learn from both successes and failures has allowed the city to advance even with limited resources.

As the environmental challenges of the 1970s and 1980s gave way to the climate challenges of the 1990s and beyond, the community capitalized on the lessons learned from past actions. The focus on sustainability and resilience, initially championed by government and community leaders, eventually became a dominant paradigm.

### Definition of the problem

Located over 85 miles from the nearest coast, sea level rise is a non-issue in Northampton. Increasing periods of excess heat, larger and more frequent storm events, inland flooding, drought, the potential for new disease vectors, increasing social stress, potential future energy grid interruptions, and the potential for climate-driven in-migration, however, have created a need to focus on resilience and mitigation, even with the challenges of investing in resilience in the face of balancing other pressing social and physical needs and limited resources.

Northampton, like most communities, requires additional external funding and support to achieve its climate resilience and mitigation objectives. While state funds allocated to local governments in Massachusetts, particularly for clean energy and resilience initiatives, along with the influx of federal funding under the Inflation Reduction Act, will provide much needed support, these resources alone will be insufficient to meet the community's needs for a more aggressive action. Enhancing the private sector's understanding of the long-term benefits of resilience investments, coupled with the potential for improved bond ratings for municipalities that prioritize resilience, will further contribute to the successful achievement of these goals.

Likewise, while state support for sustainability and climate action has been incredible it has not always spoken with one voice and competing goals. For example, while MassDOT has become a national leader in promoting walking, bicycling, and transit and mitigating the impacts of vehicles, it still spends more money funding roadway expansions that encourage more single-occupancy vehicles.

Climate action requires more systemic changes than earlier environmental challenges, such as loss of animal and plant habitat, sprawling land use patterns, contaminated water bodies, and hazardous materials releases. Those earlier challenges spawned individual problem specific approaches, such as land preservation, encouraging development near the city center, wetlands preservation, improving wastewater and other water discharge facilities, and hazardous waste cleanups. The necessary systemic changes, integrating climate action into every policy consideration, are far more rewarding but also far more difficult.

At the same time, however, there remained, and remains to this day, significant inertia from other departments, institutions, and community members with competing priorities, from members of the public concerned about development and change in their backyards or their city, from those resistant to leading with equity as being a critical aspect of sustainability, and from social trust that is less than ideal.

### **Possible Strategies and Solutions**

The City of Northampton's planning goals included sustainability and resilience long before it used those terms, but these were disparate goals within a traditional progressive planning agenda focused on the environment, land use, transportation, social equity, housing, and economic development. Northampton's political leadership, the Office of Planning and Development, the Planning Board (Planning Commission in most states), the Energy Commission, the recycling coordinator, and numerous community groups worked to advance that work.

In 2005, the Northampton Office of Planning and Development (now the Office of Planning and Sustainability), with support from the city's political leadership and the Planning Board, decided that it was time for a paradigm shift to planning oriented around sustainability, including but not limited to climate action. That paradigm shift required a more holistic view of integrating sustainability into all of those goals.

The planning office and mayor identified that a transition to a holistic view began with a commitment to build a culture of sustainability across planning, city government, and the community. This path was much easier in Northampton than in many communities since most of the planning agenda was already compatible with sustainability, there was strong political and institutional leadership and support from the mayor, City Council, the state legislative delegation, and many city boards, and there was strong support and advocacy from numerous community groups. Nonetheless, limited resources and competing goals limited institutional and community support for these efforts.

Building that culture of sustainability has long been one of the linchpins of Northampton's sustainability and climate action strategy. That culture helps build community, political, and internal support for all is as impactful as any specific regulatory, investment, policy, and institutional actions the city takes. A sustainability culture helps advance the role of sustainability in the public agenda and helps build a mindset that sustainability must be considered in most public policy deliberations.



*[Insert "Image 01" about here]*  
Figure 1. The City supports the private Pedal People trash and recycling service both because of its smaller carbon footprint and as a symbol of sustainability.

The city explored planning options to simultaneously build that culture of sustainability and develop a central sustainability planning framework. Those options included:

- Preparing a sustainability strategic plan. Ultimately, Planning and Sustainability determined that while this would be a relatively small lift, it wouldn't bring the gravitas or the longevity necessary for a paradigm shift.
- Relying completely on hiring a consultant for a comprehensive planning process. The city lacked the resources, however, to hire a consulting team that could undertake all of the steps that Planning and Sustainability had identified as necessary for a paradigm shift.
- Using a hybrid model of discrete strategic plans and studies, some in-house and some funded from small grants, to set the state and then hiring a consultant team to work collaboratively with the city on a sustainability focused comprehensive plan. Planning and Sustainability and the mayor ultimately decided that they could find the resources for this approach and it would provide the opportunity to deeply engage the community and build a shared mission and social trust in the outcomes.

As the city developed that culture, sustainability, encompassing but not limited to climate action, became the central focus of many policy deliberations on regulations, public spending, and other public policy considerations.

## **Solution and Implementation**

The city's efforts to build a holistic sustainability and climate approach began with various internal and external conversations. The Office Planning and Development identified the need for a new comprehensive plan and proposed that the planning process be used to develop a sustainability framework. The mayor, concerned that individual policies and board advocacy

were poorly integrated and was sometimes conflicted with other policies, quickly agreed to the process and became a strong advocate. The Planning Board and many members of the City Council, frustrated by their reliance on strategic plans due to an outdated and ineffective comprehensive plan, promptly endorsed the initiative. At the time, there were limited community advocacy groups working on and advocating for climate action. There was, however, strong community and city board support for reducing energy use and addressing environmental issues, which translated into partners and advocates for the process. There was little opposition per se, but some city departments and many community members didn't want to fully engage or embrace the basic premise that sustainability should become an organizing principle, and not just one more equal among many city goals.

The first step of the process was for Planning and Development to apply for a Communities by Design Sustainable Design Assessment Team (SDAT), a program at the time deeply subsidized by the American Institute of Architects. The SDAT was invited in to provide a multi-disciplined outsider view of how a sustainability framework could look. Ironically, the team's recommendations themselves were not particularly pivotal to the process. It was the community sustainability conversation and consensus building on that made the process a watershed event.

The SDAT, other strategic studies of zoning and other aspects of Northampton's planning, and an eventual Sustainable Northampton Comprehensive Plan created a sustainability and climate framework. These efforts have since been integrated into numerous plans and implementation actions. Today, the city has a revised comprehensive plan, an Office of Planning and Sustainability that focuses on many aspects of sustainability, a newly established dedicated Department of Climate Action and Project Administration, and an active Energy and Sustainability Commission. A focus on sustainability, resilience, and their the co-benefits—including expanded housing and transportation options, the restoration of natural systems, enhanced streetscapes, and improved community health—have yielded tangible returns on the city's resilience investments.

Northampton's journey included a number of sustainability and climate action milestones, to change Northampton's planning framework and build a culture of sustainability and simultaneously promote climate action.

### *Climate Action Milestones*

- Prior to 2005, the Northampton Office of Planning and Development focused on creating a compact, walkable city with diverse housing choices, prioritizing conservation, implementing hazard mitigation strategies, and addressing climate change. Early climate change efforts



[Insert 02A and 02B figure around here]

Figure 2. Public forums on the 2005 Sustainable Design Assessment



included an intern create the city's first greenhouse gas emissions inventory in 2001. Most of the city's climate action, however, at that time focused on resilience to storm events, with mitigation was primarily focused on reducing energy usage in city buildings and setting an example for the community. These, and many other related actions, contributed to the city earning Massachusetts' highest "Commonwealth Capital" score for its commitment to smart growth and sustainability. During this period, the Central Services department employed a part-time Energy Officer who was tasked with overseeing the performance of city-owned buildings. This position eventually became vacant and the mayor opted not to fill it until there was a clearer defining framework for the position.

- In 2005, the Office of Planning and Development kicked off the process of reorienting all planning functions around sustainability by inviting an external inter-disciplinary AIA Sustainable Design Assessment Team to help the city develop a more comprehensive sustainability framework. This collaborative effort marked the beginning of a deeper commitment to build a sustainability framework and culture.
- By 2008, Northampton formally adopted the *Sustainable Northampton Comprehensive Plan*, establishing its first sustainability and climate framework. The city also created the Energy and Sustainability Commission, a citizen-led body designed to advise and guide sustainability efforts. That same year, the position of Energy and Sustainability Officer was created within Central Services (the City's public building managers) to further support the city's sustainability initiatives.
- In 2010, Northampton adopted the Massachusetts energy stretch code, an updated set of building performance standards that went beyond the requirements of the statewide building code. Led by the City's Energy and Sustainability Officer, the City became a Massachusetts Green Community, signifying the city's commitment to energy efficiency and sustainability and making it eligible for related energy grants. The Energy and Sustainability officer coordinated a Municipal Energy Reduction Plan focused on city operations that same year.
- In 2011, as part of related work to research the best methods of assessing sustainability (Feiden 2011 and 2018), Planning and Development adopted a sustainability logo to message the department and hopefully the city's unifying theme.
- In 2013, the city restructured its planning and development functions, renaming the department Planning & Sustainability, signaling an even stronger focus on salient climate-related goals.
- The city achieved a milestone in 2014 when it became the first municipality to receive the 5-STAR Community Rating, recognizing Northampton as a national leader in sustainability.



[Insert Image 03 about here]

Figure 3. Northampton Office of Planning and Sustainability's logo represents the office's primary mission of sustainability.

- In 2015, the city again engaged an AIA Sustainable Design Assessment Team to evaluate its progress and identify the next steps in its sustainability journey.
- In 2016, Planning and Sustainability coordinated an update of the 2001 Greenhouse Gas inventory, knowing that the data was inexact but it advanced the community conversation and high level priorities.

- By 2018, Northampton had set clear vulnerability and resilience goals, marking the first step toward the creation of a climate action plan (CAP). This laid the groundwork for more specific actions to mitigate climate risks and enhance resilience.

- In 2020, a city consultant delivered the *Climate Resilience and Regeneration Plan*, and, in collaboration with the Energy and Sustainability Commission and several climate action advocacy groups, the city began working on more ambitious, yet achievable, climate goals. A healthy debate, slowed by COVID-19 restrictions, took six months to resolve the balance between ambition and achievability. It ultimately, however, helped the city reach a consensus on its climate action targets, gaining strong political and community support. City staff revised and strengthened the resilience and regeneration plan to align it with the consensus and enhance pathways to action.



[Insert Image 04 about here]

Figure 4. The city held a design competition, shown here in a local art gallery, for how affordable housing on a surplus city lot can demonstrate green housing for all.



[Insert Image 05 about here]

Figure 5. Northampton sustainability and climate public forum

- These efforts culminated in early 2021, when the city adopted its Climate Resilience and Regeneration Plan as its climate action plan. Key components of the plan included the ambitious target of making city operations carbon neutral by 2030 and achieving carbon neutrality for the entire community by 2040. By the end of 2021, the Sustainable Northampton Comprehensive Plan was revised to incorporate the Climate Resilience and Regeneration Plan. The City also began exploring ways to integrate climate goals into the

municipal Capital Improvements Plan (CIP) not just for specific climate-related investments but also to create a lens to evaluate all CIP requests.

- In response to growing advocacy, 2021 also saw climate advocacy lobbying efforts aimed at persuading the mayor to establish a dedicated climate action department instead of splitting the responsibilities between Central Services and Planning and Sustainability.
- This advocacy bore fruit in 2022, when the mayor created the Department of Climate Action and Policy Administration, a new city department tasked with overseeing climate policy, climate action public building investments, and coordinating city procurement, while keeping the sustainability focus on land use, transportation, regulatory systems, and other actions with Planning and Sustainability. The first Climate Action department director was hired in 2023.
- In 2022, Northampton also made significant strides in its approach to sustainable affordable housing. The Office of Planning & Sustainability adopted standards requiring that all affordable housing projects receiving significant city funding or donations of surplus city land be fossil fuel-free. Additionally, the city achieved gold-level certification from the US Green Building Council (USGBC) as part of the LEED for Cities program, further solidifying its commitment to sustainability. Furthermore, the city required all CIP, regardless of whether they were climate focused or not, requests to specify how they would address climate objectives, ensuring that future investments align with the city's long-term climate goals.
- By 2023, the mayor took further steps to strengthen the city's climate efforts, creating a climate change stabilization account under Massachusetts General Law (MGL c. 40, Section 5B) to ensure dedicated funding for climate-related projects. The city also adopted the state's opt-in specialized energy stretch code, which imposed higher efficiency standards for buildings and moved closer to a fossil-free code standard.
- In 2024, Northampton achieved a significant milestone by being accepted into the state's Fossil Fuel-Free Pilot Program, which authorized the city to adopt regulations requiring all new construction and major renovations to be fossil fuel-free. This pilot program represents the next step in Northampton's ambitious transition toward a sustainable and climate-resilient future. Northampton is also advancing to joining the state's new Climate Leader Community program, making the city eligible for additional climate related grants as part of an enhanced commitment to address climate issues.

## **Results**

Northampton's strategic vision helped align the specific tactics necessary to achieve that vision. Departments with the strongest institutional climate action charges (Planning and Sustainability, Climate Action and Project Administration, and Central Services) had the luxury of spending more time on climate action with fewer competing priorities than other departments. The ability to fulfil co-benefits, more attractive landscapes with street trees, more transportation choices with non-single-occupancy vehicle options, etc., has been a key part of building momentum.

Northampton was successful at building a sustainability paradigm and a community sustainability culture that allowed it to be an early and continuing leader in areas as diverse as sustainable transportation, open space preservation and restoration, affordable housing, and climate action, being a leader in each of those areas. Northampton was able to move earlier in each of those areas, even before state resources were available, because of that consensus.

The good news is that the 20-year effort to build a sustainability paradigm was far from a 20-year effort that didn't pay off for many years. Rather, it paid off almost immediately in public support for projects, support that grew over the years so that things that were very hard 20 years ago such as bicycle and pedestrian facilities or open space preservation are now widely accepted and generally supported. Success breeds success, building momentum.

Nationwide trends of a reduction in trust in governments, the weakening of the social contract, and the challenges of communicating in a fragmented media and social media environment have not been negated by the sustainability paradigm, but at least in climate action, community support and resources are stronger than ever.

Inter-department cooperation has always been a critical part of the effort, with signaling from political leaders as to overall priorities. Cooperation has minimized the effects of working in silos but has not solved the issues of limited resources and prioritizing mission critical operations.

## **Lessons Learned**

Over the course of the two decades sustainability transition, Northampton learned valuable lessons through its climate resilience initiatives. One key takeaway was the importance of incrementalism, particularly when addressing controversial issues, as gradual progress helped build broader support, while always keeping the eye on the bigger long-term prize.

The city also adopted a holistic approach, recognizing that transit-related focuses such as reducing vehicle miles traveled and enhancing walkability are essential components of climate action. A balance between climate mitigation and adaptation proved crucial in crafting comprehensive strategies that addressed both current and future challenges. Success was further driven by embedding climate goals within existing government structures—such as incorporating them into the Capital Improvement Plan (CIP) and assigning core responsibilities to multiple departments. Strong leadership, from the mayor to department heads and boards, was central to maintaining momentum, alongside the ongoing communication that kept the community engaged. Finally, the contagious nature of successes in areas like solar energy, electric vehicles, and urban forestry played a vital role: as these initiatives gained traction, they inspired further action and reinforced a positive cycle of progress.

Throughout the same period, there were several important lessons that required adjustment. One of the primary challenges was finding the right balance between setting aspirational goals and ensuring they remained achievable. At times, external events—such as the COVID-19 pandemic or increasing demands on the education system—distracted attention and hindered progress on climate priorities. Additionally, internal support from city departments not directly involved in

climate action was often slow, as they juggled competing priorities. While Northampton received recognition for its sustainability efforts, these accolades sometimes overshadowed the day-to-day challenges of implementation, leading to a disconnect between perception and reality. It became clear that climate action lacked universal support, with some sectors of the community remaining skeptical or indifferent. Building social trust and fostering a shared sense of values proved difficult, and community-wide conversations around climate issues were still limited. Tracking progress also posed challenges, particularly when trying to monitor actions taken by residents and organizations outside of city control. Furthermore, while federal programs provided some financial support, the broader landscape for climate funding remained inconsistent and often inadequate, as agencies were not always aligned or responsive to local needs.

No one player can claim that they led this culture change because there were so many entities inside and outside of government working mostly in partnership although occasionally at odds with the City's efforts. At all stages of that transformation, however, the mayor and the Office of Planning and Sustainability were critical parts of the process, with very strong City Council and board support. Elected and appointed officials helped lead the process, with many community partners, and were willing to take the necessary political risks.

At the same time, community members, board members, and community organizations played irreplaceable roles in advocacy and in balancing naysayers and NIMBY movements.

Challenges, of course, remain. Neighborhoods still oppose more density, even when density is critical to maximizing the percentage of trips that can be done on foot, by bicycle, and by transit. As Bill Dwight, then president of the City Council, said after leading the City Council to vote unanimously on a controversial package to upzone residential and mixed-use areas within walking distance of the urban core, "If we believe in Sustainable Northampton, this is what it means."

Likewise, even those few times when there is complete agreement on desired outcomes, competing priorities always come up. Paraphrasing one mayor, for example, "I totally support walking and bicycling, but my call sheets are overwhelmingly filled with drivers complaining about potholes, so of course those potholes come to the top of the pile."

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### **Interviews**

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- Carole Collins, former Director, Northampton Climate Action and Project Administration
- Adele Franks, Local Energy Advocates
- Denise Lello, Mothers Out Front
- Chris Mason, Former Energy and Sustainability Officer
- Carolyn Misch, AICP, Northampton Director, Planning and Sustainability
- Mayor Gina-Louise Sciarra
- Ben Weil, Director, Northampton Climate Action and Project Administration
- Alan Wolf, Northampton Mayor's Chief of Staff