

Appendix A: Case Studies of the 10 Benchmark Cities

Asheville, NC

City Characteristics

Population	91,090 ⁶²
Growth Profile	Asheville has grown 10.2% between 2010 and 2017.
Emissions Profile	Asheville has achieved 31% of their 80% emissions reduction goal .

Key Takeaways from Benchmarking Interview

Sustainability Office Summary

Office Location	Currently located in City Manager’s Office; previously located in Public Works Department, Planning Department, and Finance Office
Staffing	2 FTEs: Sustainability Officer and Energy Programs Coordinator
Structures for inter-agency collaboration	Office hosts regular meetings with the Department of General Services, bringing in additional agencies as necessary to advance discussions
Structures for community engagement	Sustainability Advisory Committee appointed by City Council
Funding sources referenced during interview	Capital Improvement Program submitted and reviewed by City Council annually
Metrics referenced during interview	Not discussed

⁶² All population figures and growth profiles included in this document come from the US Census Quickfacts database-<https://www.census.gov/quickfacts/fact/table/US/PST045217>. Additionally, each of these are based on estimates from the 2017 American Community Survey, and the percent changes are between the 2010 Census count and the 2017 ACS estimate.

- Like many sustainability programs, Asheville’s has moved around; it is currently located in the City Manager’s Office, which feels like the right fit for their program, given the support they draw from the office and their engagement with the other department directors
- Office both implements programs and advises other agencies – would prefer to be implementing less unilaterally to allow more time for strategic sustainability planning
- Funding in Asheville is limited, so office has been unable to scale size to match the scope of work they have
- Office has strong support from City Manager and from the community
- Office works collaboratively with the Department of General Services and has become an advocate for them to ensure they are able to implement sustainable initiatives
- Asheville’s City Council appoints a Sustainability Advisory Committee that worked on a 100% renewable energy by 2030 goal over the past year
- Sustainability Office recommends aligning sustainability objectives with the goals of other departments and prioritizing based on carbon
- Asheville has an Equity Core Team of which the Sustainability Office is a part

Sustainability Programs Summary

Climate Commitments

The City of Asheville has adopted an 80% reduction in municipal emissions [goal](#) from 2008 levels. Asheville reports that they have reduced municipal emissions 31%. Asheville is a member of Mayors for 100% Clean Energy and the Mayors National Climate Action Agenda.

Existing Reports

As part of their carbon reduction initiative, the City of Asheville has issued annual reports detailing the specific measures they have taken to reduce their carbon emissions towards this 80% goal and increase resiliency.

- [Asheville Climate Resilience Assessment Report \(2018\)](#)-This report, written in collaboration with the National Environmental Modeling and Analysis Center at UNC Asheville, comprehensively assesses Asheville’s climate vulnerability across sectors and provides resilience-building options that the city can undertake for each assessed vulnerability.
- [Asheville Sustainability Management Plan \(2009\)](#)-This plan, adopted in 2009, guides sustainability planning at every level in the city. It contains six focus areas across sectors, including: buildings, facilities, and street lighting, transportation, water, solid waste, land use, and education and communication. It contains 107 distinct action items for the city from each of these areas.

Current Programs

To support their carbon reduction goals, the City of Asheville is in the process of implementing carbon reduction initiatives. These include programs to reduce fuel use in their city fleet, a new LED Streetlight Program, green building rebates for new construction and the building of new greenways and bike

paths. The City of Asheville has categorized their sustainability planning under Sustainable Energy and Sustainable Economic Development.

Sector	Area	Summary
Transportation	Multimodal	The City of Asheville has expanded its greenway/bikeway infrastructure, with a total of 4.99 greenway miles constructed. Additionally, the City of Asheville is now up to 16.6 miles of bike lanes. More information: Asheville 2017 Sustainability Infographic
	Electric Vehicles	The City of Asheville is expanding its EV charging infrastructure, with two new stations built in FY2017. They are now up to 42 stations in total. Additionally, they are now up to 29 hybrid buses in its public transportation network. More information: Asheville 2017 Sustainability Infographic Asheville Office of Sustainability Annual Report
Buildings	New Construction and Codes	The City of Asheville has a Land Use Incentive Policy to encourage development that is affordable and sustainable. Properties developed in Asheville’s Sustainability Map area may qualify for property tax exemptions or fee reductions. Developments earn points for a range of design elements. More information: Asheville Sustainability Infographic Asheville Land Use Incentive Policy
	Existing Buildings and Energy Conservation	The City of Asheville has issued recommendations pertaining to building retrofits as part of its 2009 Sustainability Management Plan. The goal is to modernize Asheville buildings’ HVAC systems to be energy efficient and includes the upgrading of boilers and other central systems. Additionally, the City of Asheville has implemented incentives for energy efficiency retrofits in buildings. Finally, the City has adopted a LEED Construction Standard for all city-owned buildings. City-owned buildings greater than 1,000 square feet are now required to be built to LEED Gold certification, and buildings less than 5,000 square feet are required to be built to LEED Silver. More information: City of Asheville Sustainability Management Plan
	Thermal Electrification	No information available upon our review.
	Land Use Policy	The City of Asheville issued numerous recommendations pertaining to land use as part of its 2009 Sustainability Management Plan. These include developing relevant climate change projections to inform future land use decision-making, the consideration of region-level land use planning,

		<p>the creation of a Transfer of Development Rights (TDR) mechanism, and efficient energy use in land use planning (such as expanding urban infill).</p> <p>More information: City of Asheville Sustainability Management Plan</p>
Energy Supply	Resilient Supply	No information available from our review.
	Renewables and low carbon sources	<p>The City of Asheville is scoping renewable energy opportunities through its Energy Innovation Task Force. A key goal of this task force in FY18 is to conduct a Long-Range Energy Alternatives Planning System (LEAP) analysis to further build out the case for renewables. In addition, the City of Asheville is a Solsmart Gold designated city.</p> <p>More information: City of Asheville Office of Sustainability 2017 Annual Report Asheville Earns Solsmart Gold Designation for Advancing Solar Energy Growth</p>
Circular Economy/Waste	Waste Reduction	<p>The City of Asheville has a robust recycling program and has a waste reduction goal of 50% by 2035. They have developed an interactive website where residents can easily determine what is and what is not recyclable, as well as how to reduce waste.</p> <p>More information: City of Asheville Department of Sanitation</p>
	Habitat Protection	<p>Asheville actively considered habitat protection in its goals set out in the 2009 Sustainability Management Plan. They recommended the creation of a non-regulatory map of potential conservation lands and the identification of community conservation priorities, as well as the development of a conservation/natural resources plan. These priorities are outlined in the 2018 Climate Resilience Assessment Report.</p> <p>More information: City of Asheville Sustainability Management Plan City of Asheville Climate Resilience Assessment Report</p>
Climate Resilience		<p>The City of Asheville has partnered with the National Environmental Modeling and Analysis Center to produce a cross-sectoral vulnerability assessment and a summary of options for building resilience and specific options for discrete geographic regions of Asheville.</p> <p>The next phase of the project will be public information sessions in early 2019, which will result in a Climate Resilience Resource Guide for the city.</p> <p>More information: City of Asheville Climate Resilience Assessment Report</p>

<p>Inclusion and Outreach</p>	<p>Equitable Programs</p>	<p>The City of Asheville has a Sustainability Advisory Committee on Energy and the Environment that consists of nine members appointed by the city council. The committee is tasked with developing recommendations for sustainable energy, waste reduction, economic development, and broader land use planning. This consist primarily of community members to ensure equity in sustainability decision-making.</p> <p>The City has also established an Equity Core Team of which the Sustainability Office is a part.</p> <p>More information: City of Asheville Sustainability Advisory Committee on Energy and the Environment</p>
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Notable Partnerships (if any)

To help support their efforts, Asheville is engaged in partnerships with Brightfield Transportation Solutions for the expansion of their EV charging infrastructure, as well as Duke Energy for their fuel switching initiatives.

Berkeley, CA

City Characteristics

Population	122,324
Growth Profile	Berkeley has grown 8.7% between 2010 and 2017.
Emissions Profile	Berkeley has reduced emissions 12% between 2000 and 2015 .

Key Takeaways from Benchmarking Interview

Sustainability Office Summary

Office Location	Office of Energy and Sustainable Development within the Office of Development; previously located in Housing Department
Staffing	8 FTEs, a few part-time Roles include: <ul style="list-style-type: none"> • Outreach Coordinator • 3 Buildings Staff (municipal and large buildings/energy savings programs/green buildings and reach codes) • 2 staff focused on Climate Action Plan reporting, equity, adaptation
Structures for inter-agency collaboration	Utilizes CAP implantation and annual reports to City Council to guide engagement
Structures for community engagement	City Council Commissions Berkeley Climate Action Coalition
Funding sources referenced during interviews	General fund, grants (EPIC, 100RC), Building Energy Savings Program fees
Metrics referenced during interviews	Greenhouse gas inventory Working on 8 metrics related to CAP goals that will be available through Berkeley’s Open Data portal

- Berkeley’s sustainability program originated in the housing department as part of the city’s weatherization program; was relocated to the Office of development giving them greater insight into green buildings, reach codes and zoning
 - Office currently has eight FTEs, but indicated this was short-staffed for them
- Office both implements programs and leads coordination with other agencies
- Office has strong support from the Mayor, City Council and community
- Office uses Climate Action Plan (CAP) as organizing principle for working with other agencies, which creates a high level of accountability because an update is provided to City Council every year
- Office uses Berkeley’s Council Commission structure to engaged public, as well as the Berkeley Climate Action Coalition which they co-convene with a local non-profit, the Ecology Center

- Berkeley is considering how to integrate equity into their work, utilizing USDN’s targeted universalism principle
 - They are developing a Community Driven Adaptation Workshop
- Sustainable Development Coordinator recommends supporting internal advocates at other agencies to help advance key priorities

Sustainability Program Summary

Climate Commitments

The City of Berkeley aims to [reduce](#) carbon emissions by 80% below 2000 levels by 2050. As part of this goal, they have set a sub-goal of a 33% reduction below 2000 levels by 2020. The City of Berkeley is a member of Mayors for 100% Clean Energy and the Mayors National Climate Action Agenda.

Existing Reports

- [Berkeley Resilience Strategy \(2016\)](#)-This document, published in collaboration with 100 Resilient Cities, details Berkeley’s resilience-building strategies. It details goals and associated action steps in the areas of community preparedness and connectivity, clean energy transition acceleration, climate change adaptation, advancing racial equity, working together within city government, and building resilience.
- [Berkeley Climate Action Plan \(2009\)](#)-This Climate Action Plan sets forth Berkeley’s 80% carbon reduction goal and its accompanying initiatives in pursuit of this. The City of Berkeley has released annual progress updates for their goals and initiatives, the most recent of which can be found [here](#).

Current Programs

As part of their carbon reduction efforts, the City of Berkeley has set several goals for a more sustainable Berkeley and are actively tracking them in their annual CAP updates. These goals include zero net energy consumption in buildings, the widespread adoption of sustainable transportation modes, the achievement of zero waste, widespread EV adoption, and equitable sharing of the social and economic benefits of climate protection. Specific initiatives Berkeley is undertaking in pursuit of its carbon reduction goals can be found in the table below.

Sector	Area	Summary
Transportation	Multimodal	As part of its Climate Action Plan the City of Berkeley has set the goal of making public transit, walking, and cycling the primary transportation modes in the city. In pursuit of this goal they have expanded their bike share and car share infrastructure, and plan to publish independent Bike Plan and Pedestrian Plan documents to further increase the use of sustainable transportation in the city. More information: City of Berkeley Climate Action Plan City of Berkeley Climate Action Plan 2017 Annual Update

	<p>Electric Vehicles</p>	<p>As part of its Climate Action Plan, the City of Berkeley has set the goal of expanding electric vehicle usage. In pursuit of this goal, they have expanded their EV charging infrastructure significantly since their adoption of the CAP goals, including the implementation of a Residential Curbside EV Charging Pilot, as well as a community discount for solar & electric vehicles. Additionally, they are currently developing an Electric Vehicle Roadmap led by Cadmus. They also plan on conducting a Municipal Fleet analysis.</p> <p>Additionally, as part of its Resilience Strategy, the City of Berkeley set the goal of continuing to promote EVs as a low-carbon transportation source.</p> <p>More information: Berkeley Resilience Strategy Electric Vehicle Charging City of Berkeley Climate Action Plan 2017 Annual Update-Staff Report</p>
<p>Buildings</p>	<p>New Construction and Codes</p>	<p>As part of its Climate Action Plan, the City of Berkeley has implemented the goal of making green building the standard for new construction. As of the 2017 CAP Update, there are 70 verified Green Buildings, 51 of which are LEED Certified. They are also currently developing an analysis of opportunities to develop energy efficiency reach codes for new and remodeled buildings.</p> <p>More information: City of Berkeley Climate Action Plan City of Berkeley Climate Action Plan 2017 Annual Update</p>
	<p>Existing Buildings and Energy Conservation</p>	<p>As part of its Climate Action Plan, the City of Berkeley has set a Net Zero Energy consumption goal for buildings. As part of this goal they have implemented a building energy saving ordinance that requires all buildings to undergo a comprehensive energy assessment. Additionally, 286 single family homes have been upgraded through Energy Upgrade California and 612 multifamily units have been upgraded through Bay Area Multifamily Building Enhancements Program. In addition to these efforts, The City of Berkeley has formed community partnerships (such as with KyotoUSA, a nonprofit that works on renewable energy installation) to assess further retrofit opportunities. Finally, the City of Berkeley has a PACE financing program for property owners that allows for efficiency upgrades, renewable energy installation, and seismic retrofits, and additionally may be combined with rebates.</p> <p>More information: City of Berkeley Climate Action Plan 2017 Annual Update Property Assessed Clean Energy Financing</p>

	<p>Thermal Electrification</p>	<p>As part of its 2016 Resilience Strategy, the City of Berkeley set the goal of encouraging fuel-switching from natural gas in buildings.</p> <p>More information: Berkeley Resilience Strategy</p>
	<p>Land Use Policy</p>	<p>As part of its Climate Action Plan, the City of Berkeley has adopted the goal of ensuring that new development is coupled with enhancements to green and open space, in addition to urban forestry. In pursuit of this goal, it has sought to increase its urban tree cover, in addition to its expansion of green space.</p> <p>Additionally, as part of its Resilience Strategy, the City of Berkeley set the goal of incorporating climate impacts into long-term land use decisions. They also set the goal of replacing water-intensive landscapes with more drought-tolerant turf varieties throughout the city.</p> <p>More information: Berkeley Resilience Strategy Adapting to a Changing Climate - Tree Gain City of Berkeley Climate Action Plan</p>
<p>Energy Supply</p>	<p>Resilient Supply</p>	<p>As part of its Climate Action Plan, the City of Berkeley has set the goal of developing a local and decentralized renewable energy supply to meet their community energy needs. In pursuit of this goal, they received a \$1.5 million grant from the California Energy Commission’s Electric Program Investment Charge Program (EPIC) in fall 2016 to conduct a feasibility study for a community microgrid (titled the Berkeley Energy Assurance Transformation, or BEAT, initiative). This was pursuant to its goal of developing a clean micro-grid network that it set out in its Resilience Strategy.</p> <p>More information: Berkeley Resilience Strategy BEAT Microgrid</p>
	<p>Renewables and Low Carbon Sources</p>	<p>As part of its Climate Action Plan, the City of Berkeley has set the goal of developing a local and decentralized renewable energy supply to meet their community energy needs. In pursuit of this goal, they have accomplished over 2,000 solar rooftop projects within the city. They intend to conduct outreach for East Bay Community Energy in pursuit of additional solar expansion.</p> <p>Additionally, as part of its Resilience Strategy, the City of Berkeley set the goal of developing a Solar Action Plan to achieve 50% solar energy by 2030.</p> <p>More information: Berkeley Resilience Strategy</p>

		City of Berkeley Climate Action Plan City of Berkeley Climate Action Plan 2017 Annual Update
Circular Economy/Waste	Waste Reduction	<p>As part of its Climate Action Plan, the City of Berkeley has set the goal of achievement of Zero Waste by 2020. In pursuit of this goal, the city has achieved a 51% increase in curbside compost and an 89% increase in construction and demolition diversion as part of its robust recycling and waste reduction programs and outreach. They intend to publish a Zero Waste Strategic Plan and a Transfer Station Redesign Master Plan, as well as increase diversion at city facilities in the near future.</p> <p>More information: City of Berkeley Climate Action Plan City of Berkeley Climate Action Plan 2017 Annual Update Zero Waste</p>
	Habitat Protection	No information readily available upon our review.
Climate Resilience		<p>In partnership with 100 Resilient Cities, the City of Berkeley released a Resilience Strategy in 2016. It details the goals of building a connected and prepared community, accelerating their clean energy transition, adapting to a changing climate, advancing racial equity, working together within city government, and building regional resilience, with prospective action steps laid out in each area that dovetail with and compliment many of the existing programs laid out here.</p> <p>More information: Berkeley Resilience Strategy</p>
Inclusion and Outreach	Equitable Programs	<p>The City of Berkeley has a robust community outreach program as part of its CAP, which includes the formation of the Berkeley Climate Action Coalition. The coalition, consisting of business, education institutions, public health organizations, and other entity types, is the primary community network for the implementation of the CAP.</p> <p>Additionally, the City of Berkeley set out the goal of advancing racial equity as part of its Resilience Strategy and set the sub-goal of developing a City Racial Equity Action Plan in pursuit of this.</p> <p>More information: Berkeley Resilience Strategy Berkeley Climate Action Coalition Berkeley Resilience Strategy</p>

Notable Partnerships (if any)

The City of Berkeley has partnered with Energy Upgrade California and the Bay Area Multifamily Building Enhancements Program for much of its residential retrofit work. In addition, they are seeking to partner with East Bay Community Energy for implementation of their renewable energy goals. Finally, as part of its Resilience Strategy, the City of Berkeley set the goal of building regional resilience and outlines many prospective partnerships (such as with the other 100RC Network Cities in California) that could be formed in pursuit of this goal.

More information:

[City of Berkeley Climate Action Plan 2017 Annual Update](#)

[Berkeley Resilience Strategy](#)

Boulder, CO

City Characteristics

Population	107,125
Growth Profile	Boulder grew 9.6% between 2010 and 2017.
Emissions Profile	The City of Boulder has reduced emissions by 13% since 2005 .

Key Takeaways from Benchmarking Interview

Sustainability Office Summary

Office Location	Own office; started in CMO and was previously part of the Division of Planning, Housing and Sustainability
Staffing	18 FTE <ul style="list-style-type: none"> • 6 FTE working on Zero Waste, material consumption, food issue • 6 FTE working on climate and energy issues • 6 FTE working on local power
Structures for inter-agency collaboration	Informal collaboration; when setting up a working group, they develop a charter with expectations and roles
Structures for community engagement	City has centralized Community Engagement office that helps determine right level of engagement for projects
Funding sources referenced during interview	Four voter-approved dedicated taxes: <ul style="list-style-type: none"> • Sales Tax for open space • Trash Tax (fee on waste haulers) to support compost, recycling, and circular economy • Climate Action Plan Tax (tax on every kWh used in city) • Utility occupation Tax <ul style="list-style-type: none"> ○ Will sunset once municipalization is complete
Metrics referenced during interview	Not discussed

- Location in CMO office was not a good fit for Boulder because it limited collaboration with departments.
- Sustainability staff approaches informal collaboration with agencies by asking how they can help the other departments do the work they are already doing in a more sustainable manner.
- Stakeholder engagement has been an essential part of Boulder’s success in passing mandates; while challenging and time consuming, staff considers is critical to progress.
 - Stakeholder engagement is centralized in a Community Engagement office that helps agencies determine the right level of engagement for projects.
 - Spectrum of engagement is: inform, consult, collaborate, engage

- When developing programs, sustainability staff tries to find market gaps that they can most effectively address.
 - For example, they are not offering EV purchase incentives because these are available at the state and federal level; focusing instead on supporting the build out charging infrastructure along transit corridors, on publicly accessible sites, and affordable housing.
- City has engaged Government Alliance on Racial Equity to train staff and assist in development of a city-wide equity framework.

Sustainability Program Summary

Climate Commitments

The City of Boulder has set an 80% carbon reduction [goal](#) by the year 2050 from a 2005 baseline. Additionally, the City of Boulder is a member of the Carbon Neutral Cities Alliance.

Existing Reports

- [Resilient Boulder 2017 Progress Report \(2017\)](#)-This infographic, produced in partnership with 100 Resilient Cities, gives a brief overview of progress made on goals set out in the Resilient Boulder document, as well as potential next steps.
- [Resilient Boulder \(2016\)](#)-This report, written in partnership with 100 Resilient Cities, details its goals for creating a more resilient Boulder. It contains sections on the context for Boulder’s resilience challenges, their framework and approach, and strategies in action areas as diverse as hazard mitigation, community action, and ecosystem management and conservation.
- [Boulder’s Climate Commitment \(2016\)](#)-This report details the actions it is taking towards its 80x50 goal in four actions areas: energy, ecosystems, resources, and community climate action. It puts forth the actions it seeks to undertake, highlights relevant community partners for each action area, and details next steps towards achieving its carbon reduction goals.

Current Programs

As part of this commitment, the City of Boulder has set goals in four distinct action areas: energy, ecosystems, resources, and community climate action. As of its 2016 [Greenhouse Gas Inventory](#), the City of Boulder had achieved a 147,000-metric ton reduction. The varied and ongoing initiatives that have led to this reduction can be found in the table below.

Sector	Area	Summary
Transportation	Multimodal	As part of its climate commitment, the City of Boulder is creating and expanding multiple mobility options. This includes the expansion of transit access, ride share program, and bike lanes, as well as increasing pedestrian efficiency by mobile route mapping. More information: Boulder’s Climate Commitment-Energy

	Electric Vehicles	<p>As part of its climate commitment, the City of Boulder is supporting the adoption of electric vehicles. In pursuit of this goal, the City of Boulder seeks to expand its EV charging infrastructure, in addition to developing an employee EV commuting pilot project. Finally, it seeks to promote electrification for the Regional Transit District (RTD) transit fleet.</p> <p>More information: Energy</p>
Buildings	New Construction and Codes	<p>As part of its climate commitment, the City of Boulder has set the priority of having all buildings in Boulder be high performance by 2050. This includes the implementation of net zero energy codes for new and existing buildings. More information: Boulder’s Climate Commitment Boulder’s Climate Commitment Landing Page</p>
	Existing Buildings and Energy Conservation	<p>As part of its climate commitment, the City of Boulder has prioritized having all buildings in Boulder be high performance by 2050. For existing buildings, this consists of the piloting of net zero energy retrofits and assisting building owners in identifying opportunities for switching from natural gas in buildings.</p> <p>For residential buildings, the City of Boulder seeks to implement time-of-sale efficiency requirements for new housing, increase rental housing compliance with energy efficiency requirements by 2019, and has implemented PACE financing for Boulder property owners. Additionally, the City of Boulder has a robust energy efficiency rebate program, called EnergySmart. This program, in addition to providing a home energy advisory and assessment service, provides rebates for energy efficiency upgrades as well as solar installation on existing buildings.</p> <p>More information: Boulder’s Climate Commitment Boulder’s Climate Commitment-Energy EnergySmart</p>
	Thermal Electrification	<p>As part of its 100% clean goal (see below), the City of Boulder has stated that it seeks to create fuel switching opportunities from natural gas for buildings. Additionally, as part of its EnergySmart program, the City of Boulder provides rebates for electrification upgrades such as heat pumps and hot water heaters.</p> <p>More information: EnergySmart-Allowed Projects</p>
	Land Use Policy	<p>As part of its climate commitment, the City of Boulder has included land use planning in its clean mobility goals. This includes the integration of mixed used development within</p>

		<p>neighborhoods, the creation of parking districts with enhanced mobility options, and the continuation of currently existing complete streets planning.</p> <p>More information: Boulder’s Climate Commitment Boulder’s Climate Commitment-Energy</p>
Energy	Resilient Supply	<p>As part of its climate commitment, the City of Boulder has prioritized having all buildings be high performance by 2050. As part of this goal, the City of Boulder seeks to build energy resilience by mapping opportunities for decentralization and energy system upgrades to sustain operations during power grid disruption.</p> <p>More information: Boulder’s Climate Commitment-Energy</p>
	Renewables and Low Carbon Sources	<p>As part of its climate commitment, the City of Boulder has set a goal of 100% clean electricity by 2030. Actions in pursuit of this goal include piloting solar procurement programs in partnership with Boulder County, the municipalization of their electric supply so that renewable energy opportunities might be created, and the creation of building and vehicle fuel switching opportunities. Additionally, the EnergySmart program provides rebates for solar installation on new and existing buildings.</p> <p>More information: Resilient Boulder Boulder’s Climate Commitment-Energy</p>
Circular Economy/Waste	Waste Reduction	<p>The City of Boulder is implementing a Universal Zero Waste Ordinance, which seeks to generate new materials from 85% of waste by 2025. As part of this, all single-family homeowners must subscribe to waste hauling services, all special events in Boulder are required to have both recycling and composting collection, and all recyclable materials must be directed to the Boulder County Recycling Center.</p> <p>More information: Universal Zero Waste Ordinance</p>
	Habitat Protection	<p>The City of Boulder is implementing robust habitat protection measures as part of their Open Space and Parks Master Plan. This includes the mixed-use development measures outlined in Boulder’s Climate Commitment to project greenspace, as well as the expansion of the urban forest and the improvement of invasive species and disease/pest strategies.</p> <p>More information: City of Boulder-Ecosystems Boulder’s Climate Commitment-Energy</p>
Climate Resilience		<p>In partnership with 100 Resilient Cities, the City of Boulder has produced the Resilient Boulder document, which details cross-sectoral actions the city plans to take to address its</p>

		<p>resilience challenges. Additionally, it has released a 2017 progress report on actions it has taken. These include community emergency preparedness training, climate data-sharing, community participation in wildlife conservation, and other initiatives for building resilience in Boulder.</p> <p>More information: City of Boulder-Resilience</p>
Inclusion and Outreach	Equitable Programs	<p>Boulder is implementing robust community outreach and inclusion mechanisms for climate action and resilience-building as part of its Resilient Boulder initiative, in partnership with 100 Resilient Cities. This includes community climate data-sharing, and the implementation of the Boulder Measures dashboard so community members can track and comment on a variety of its climate goals. In addition, the City of Boulder has implemented the Resilient Together program, which seeks to train community members in disaster preparedness measures as part of its Resilient Boulder initiative.</p> <p>More information: Resilient Boulder 2017 Progress Report City of Boulder Measures Dashboard</p>

Regional Partnerships (if any)

The City of Boulder is actively attempting to [promote](#) the electrification of the Regional Transit District Fleet. It is also partnering with Boulder County on a number of carbon reduction and [resilience](#) initiatives.

Cambridge, MA

City Characteristics

Population	113,630
Growth Profile	Cambridge grew by 8% between 2010 and 2017.
Emissions Profile	The City of Cambridge is currently generating an updated inventory. The most recent information available, Cambridge’s 2012 Greenhouse Gas Inventory showed a 20.1% decrease in municipal emissions since 2008.

Key Takeaways from Benchmarking Interview

Sustainability Office Summary

Office Location	Community Development Department; previously located in City Manager’s Office
Staffing	13 FTE, 1 PTE, Master’s degree candidate interns
Structures for inter-agency collaboration	Green Communities Interdepartmental Committee
Structures for community engagement	Active engagement, but no formal committee
Funding sources referenced during interview	Submits budget requests based on detailed strategic plans and associated cost estimates
Metrics referenced during interview	Annual GHG inventory, vehicle miles traveled, Building Energy Disclosure Ordinance

- Sustainability team has three main functions: (1) overseeing all climate mitigation and preparedness planning; (2) implementation of building energy policies and programs; and (3) implementation of sustainable transportation policies and programs
- Location in the Community Development Department makes them central to conversations around housing, economic development, and community planning; enables them to collaborate with other agencies in peer-to-peer fashion
- Office chairs monthly meeting of Green Communities Interdepartmental Committee which includes all departments that have environmental responsibilities to set goals and implement programs
- Office completes detailed strategic plans which are used to prioritize, make budget requests, and exercise influence over scope of work
- Director of Environmental and Transportation Planning credits Cambridge’s [Vehicle Trip Reduction Ordinance](#) and Net Zero Buildings Plan as two of the most important policies/programs advancing sustainability in the community

- Equity is a core value of Cambridge, and the office has found engaging in USDN’s equity work to be very valuable
- Director of Environmental and Transportation Planning recommends collaborating from the beginning on goal setting, bringing agencies together to achieve sustainability goals of the city, and working closely with the community, including affordable housing providers

Sustainability Program Summary

Climate Commitments

The City of Cambridge has committed to reducing emissions to 20% below 1990 levels by 2020, and carbon neutrality by 2050. More recently, the City of Cambridge adopted the goal of net zero energy consumption in buildings in pursuit of its carbon neutrality goal. The City of Cambridge is a member of ICLEI and the Mayors National Climate Action Agenda.

Existing Reports

- An updated Climate Action Plan is currently under development.
- [Low Carbon Energy Supply Strategy](#) (2018)-This report, published to Cambridge’s Net Zero Action Plan, details opportunities for the decarbonization of Cambridge’s energy supply. It assesses current and future demands and opportunities for renewables generation and develops scenarios for renewable energy delivery systems. Analysis is included on the risks, benefits, and feasibility of each scenario, along with potential implementation pathways for each respective scenario.
- [Climate Change Vulnerability Assessment \(2016\)](#)-This cross-sectoral vulnerability assessment examines climate vulnerabilities in the following key areas: critical infrastructure, social vulnerability, and economic impacts. A Climate Change Preparedness and Resilience Plan is currently under development, for release in late 2018/early 2019.
- [Net Zero Action Plan](#) (2015)-This planning document details its goal of net zero energy consumption in buildings in pursuit of its 2050 carbon neutrality goal. It puts forth action items in the following focus areas: energy efficiency in existing buildings, net zero new construction, energy supply, and investigation of a local carbon fund. It has released annual reports detailing its progress towards this goal. The most recent is linked [here](#).
- [City of Cambridge Climate Protection Plan \(2000\)](#)-This Initial Climate Action Plan was completed in 2000 in response to Cambridge signing the Mayor’s Climate Protection Agreement. It sets the goal of reducing emissions by 20% below 1990 levels by 2020. It names specific action items under the following focus areas: energy, transportation, land use, waste management, and implementation.

Current Programs

In pursuit of its carbon reduction goals, the City of Cambridge has undertaken initiatives in transportation, energy efficiency, renewables, and green building construction. These include the implementation of an EV discount program, the expansion of their EV charging infrastructure, the adoption and implementation of a Pedestrian Plan to increase the walkability of the city, as well as the adoption of a Net Zero Action Plan and accompanying Low Carbon Energy Supply Strategy and ongoing development of a Zero Waste Master Plan.

Sector	Area	Summary
Transportation	Multimodal	<p>As part of its Climate Protection Plan, the City of Cambridge adopted the goal of reducing transportation-related GHG emissions, and discusses increasing bike rideshare, and public transit infrastructure in this context. To this end, the City of Cambridge has implemented a Pedestrian Plan that seeks to make walking more attractive, provide design standards for pedestrian infrastructure improvements, outline strategies for encouraging walking over automobile use, and provide an action plan for an efficient non-automobile network through Cambridge. This includes the expansion of their multi-use path infrastructure, as well as expansion of public transportation.</p> <p>More information:</p> <p>City of Cambridge Pedestrian Plan City of Cambridge Climate Protection Plan</p>
	Electric Vehicles	<p>As part of its Climate Protection Plan, the City of Cambridge adopted the goal of reducing transportation-related GHG emissions and includes EVs and potential financing strategies for consideration. Currently, the City of Cambridge participates in the Green Energy Consumers Alliance (GECA) Drive Green Electric Vehicle discount program. Through this program GECA provides discounts on specific cars that residents may sign up for, in addition to an assessment of state and federal rebates for which the resident may qualify. Additionally, the City of Cambridge is expanding city-owned EV charging stations (which drivers can locate with an online app).</p> <p>More information:</p> <p>City of Cambridge-Electric Vehicles</p>
Buildings	New Construction and Codes	<p>In 2013, the City of Cambridge adopted the Net Zero Action Plan, which seeks to achieve net zero energy consumption in Cambridge buildings by 2040. The plan outlines several actions the City intends to take for new construction. These include the introduction of a net zero requirement, increasing green building requirements in Cambridge’s zoning ordinance, and creating net zero incentives in its zoning code such as height relaxation.</p> <p>The City of Cambridge has also implemented the Massachusetts Stretch energy code, which mandates greater performance requirements than the Commonwealth’s mandatory base code. Additionally, it has implemented a new policy that all new municipal buildings must follow</p>

		<p>LEED design standards (all buildings must be LEED certified, buildings over 50,000 square feet must be LEED Silver, and buildings in the Kendall and Central Square area must be LEED Gold).</p> <p>More information: Getting to Net Zero Framework City of Cambridge-Green Buildings City of Cambridge-Stretch Code</p>
	Existing Buildings and Energy Conservation	<p>As part of the Net Zero Action Plan this plan, the City outlines several actions it plans to take for retrofits. These include the introduction of a custom retrofit program and new performance requirements for existing buildings, as well as the implementation of the Stretch energy code, and a new Building Energy Use Disclosure Ordinance for municipal buildings over 50,000 square feet, residential buildings with 50 or more dwelling units, and non-residential properties over 25,000 square feet.</p> <p>Additionally, the City has several ongoing efficiency initiatives for residential properties, including an energy pilot program for multifamily properties and a robust rebate program in pursuit of a 100% LED goal. Finally, the City of Cambridge is piloting a new retrofit advisor service to guide multifamily property owners through the process of obtaining energy efficiency upgrades assessment for the 2018 winter season.</p> <p>More information: City of Cambridge-Green Buildings Getting to Net Zero Framework City of Cambridge-Stretch Code City of Cambridge-Multifamily Energy Pilot City of Cambridge-Building Energy Use Disclosure Ordinance City of Cambridge-Energy Efficiency and Renewable Energy</p>
	Thermal Electrification	<p>As part of its Low Carbon Energy Supply Strategy, the City of Cambridge assessed three different building electrification scenarios, one with district heating and cooling, and one with multiple supply technologies.</p> <p>More information: City of Cambridge Low Carbon Energy Supply Strategy</p>
	Land Use Policy	<p>As part of its 2001 Climate Protection Plan, the City of Cambridge adopted goals pertaining to land use, including the expansion of mixed-use, transit-oriented development and open space. Strategies included the expansion of pedestrian infrastructure, the expansion of multi-use paths, and working towards transit-oriented regional land use planning. More information on specific current initiatives can also be found in the currently active Pedestrian Plan.</p> <p>More information: City of Cambridge Climate Protection Plan City of Cambridge Pedestrian Plan</p>
Energy	Resilient Supply	<p>The City of Cambridge has released a Low Carbon Energy Supply Strategy, in which it assesses energy demand, opportunities for</p>

		<p>renewables generation, develops scenarios for renewable energy delivery systems, and assesses the risks, benefits, and feasibility of each scenario along with potential implementation pathways for each respective scenario. As part of this strategy, it outlines the potential to create district energy networks as well as implement thermal storage to increase energy resilience.</p> <p>More information: City of Cambridge Low Carbon Energy Supply Strategy</p>
	Renewables and Low Carbon Sources	<p>In its 2001 Climate Protection Plan, the City of Cambridge adopted the goal of promoting “cleaner and greener electricity”. This goal was carried forward in its 2013 Net Zero Action Plan, in which the City outlined actions it plans to take towards clean, renewable energy. These include the introduction of a rooftop Solar Ready requirement (currently partially implemented for new buildings of three or fewer stories) as well as the development of a citywide Low Carbon Energy Supply Strategy (as noted above). In addition to these actions outlined in the Net Zero Action Plan, the City has ongoing renewables initiatives, including solar installation resources for residential properties as well as resources for fuel switching in residential buildings.</p> <p>More information: Getting to Net Zero Framework City of Cambridge-Energy Efficiency and Renewable Energy City of Cambridge Low Carbon Energy Supply Strategy</p>
Circular Economy/Waste	Waste Reduction	<p>In its 2001 Climate Protection Plan, the City of Cambridge adopted the goal of promoting waste prevention. Strategies included the implementation of a waste prevention program for city government, the increase of recycling, and the promotion of residential waste diversion through education/outreach for consumption reduction and proper waste sorting. These goals were followed through on in 2018, with the city beginning to develop a new Zero Waste Master Plan. Additionally, the city has implemented a curbside compost program for buildings with 1-12 units, with an intent to expand. The City intends to achieve 30% waste diversion by 2020, and 80% waste diversion by 2050.</p> <p>More information: City of Cambridge-Department of Public Works City of Cambridge Climate Protection Plan City of Cambridge Zero Waste Master Plan Feedback Workshop City of Cambridge-Curbside Composting</p>
	Habitat Protection	No information readily available upon our review.
Climate Resilience		<p>The City of Cambridge has completed a cross-sectoral climate vulnerability assessment, focusing on projected climate impacts from temperature, precipitation, and sea-level rise. A Climate Preparedness and Resilience Plan is currently under development, for release in late 2018/early 2019.</p> <p>More information:</p>

		City of Cambridge Climate Change Vulnerability Assessment
Inclusion and Outreach	Equitable Programs	The City of Cambridge has implemented a sustainability dashboard, where citizens can track and comment on its progress on climate and transportation-related goals. More information: City of Cambridge Sustainability Dashboard

Regional Partnerships (if any)

None were noted during interview.

Columbia, MO

City Characteristics

Population	121,717
Growth Profile	Columbia, MO has grown 11.6% between 2010 and 2017.
Emissions Profile	Emissions increased 17% between 2001 and 2015 .

Key Takeaways from Benchmarking Interview

Sustainability Office Summary

Office Location	City Manager’s Office
Staffing	6 FTEs, plus two additional staff members that do not report to Sustainability Manager
Structures for inter-agency collaboration	Strong informal relationships; partnerships in agencies identified for CAP development
Structures for community engagement	Informal engagement by and with advocates
Funding sources referenced during interview	Enterprise Accounts
Metrics referenced during interview	GHG inventory, Star City Planning to develop common metrics through CAP and developing a dashboard

- Sustainability Manager seeking to restructure office to have a Sustainability Director, Climate Programs Manager, Adaptation Specialist, Mitigation Specialist, Senior Environmental Educator, and Outreach and Engagement Lead
 - In line with existing staff expertise, but would better enable office to execute on scope of work
- Office will release a Climate Action and Adaptation Plan (CAP) in June 2019
- City does not have a formal collaboration process but is looking to create one for implementation of the CAP; considering adapting a structure they utilize in Fort Collins
- Sustainability Manager recommends bringing people into the fold of sustainability, determining how to celebrate and acknowledge their work, and identify priority areas to cultivate relationships to get work accomplished

Sustainability Program Summary

Climate Commitments

The City of Columbia has set the goal of reducing community emissions 25% by 2035, 80% by 2050, and 100% by 2060. Additionally, it has set the municipal emissions reduction goals of 50% by 2035 and 100% by 2050. The City of Columbia is a member of the Mayors National Climate Action Agenda.

Existing Reports

- A Climate Action and Adaptation Plan is currently under development, to be released May 2019.
- [Columbia’s Vulnerability to Climate Change Impacts \(2017\)](#)-This report assesses vulnerability to climate change across sectors. It includes assessments in the following areas: health, safety and well-being, the built environment, water supply and quality, and energy, materials and waste. The end of the report contains next steps for the city, including the development of a Climate Action and Adaptation Plan.

Current Programs

Initiatives Columbia has taken in pursuit of its emissions reduction goals include implementation of demand-side management practices, a renewable energy ordinance for the city’s power supply, as well as steps to increase multimodal transit. These and additional notable programs are outlined in the “current programs” table below.

Sector	Area	Summary
Transportation	Multimodal	The City of Columbia is taking steps to increase mass transit usage and access, as well as increased cycling and bike path usage. More information: City of Columbia -Transportation
	Electric Vehicles	No information readily available upon our review.
Buildings	New Construction and Codes	No information readily available upon our review.
	Existing Buildings and Energy Conservation	The City of Columbia is engaging in several energy efficiency programs, including the implementation of demand-side management practices and a new energy efficiency upgrade initiative for rental properties. Additionally, it is conducting robust community outreach in partnership with Columbia Power & Light for the implementation of residential energy efficiency measures. More information: City of Columbia-Energy City of Columbia-Energy Efficiency and Sustainability
	Thermal Electrification	No information readily available upon our review.
	Land Use Policy	No information readily available upon our review.
Energy	Resilient Supply	No information readily available upon our review.
	Renewables and Low Carbon Sources	The City of Columbia has implemented a renewable energy ordinance for the city’s power supply portfolio. Currently it has 15.70% of its portfolio is from renewable sources. More information: City of Columbia-Energy

Circular Economy/Waste	Waste Reduction	The City of Columbia has a robust recycling and waste reduction program, including education programs for community education regarding waste reduction. More information: City of Columbia Utilities-Solid Waste
	Habitat Protection	The City of Columbia is implementing several habitat conservation initiatives as a part of its Community Conservation Program. This includes an education program for homeowner backyard management, a restoration program for Rock Quarry Road, and outreach initiatives for invasive species management. More information: City of Columbia-Community Conservation
Climate Resilience		The City of Columbia has completed a cross-sectoral vulnerability assessment and released the summary of results to the public. It intends to develop a Climate Action and Adaptation Plan, to be approved May 2019. More information: City of Columbia-Climate Action
Inclusion and Outreach	Equitable Programs	No information readily available upon our review.

Regional Partnerships (if any)

None were noted during interview.

Evanston, IL

City Characteristics

Population	74,756
Growth Profile	The City of Evanston has grown by .4% between 2010 and 2017.
Emissions Profile	As of 2012, the City of Evanston had reduced its emissions by 7% below 1990 levels, and as of 2017 had reduced emissions by 19% compared to a 2005 baseline.

Key Takeaways from Benchmarking Interview

Sustainability Office Summary

Office Location	City Manager’s Office
Staffing	1 FTE and AmeriCorps Fellow
Structures for inter-agency collaboration	Climate Action and Resilience Plan (CARP) requires department co-lead for each action
Structures for community engagement	CARP authored by external advocates
Funding sources referenced during interview	Not discussed
Metrics referenced during interview	Not discussed

- Considers role to be facilitating, coordinating, and providing advice on internal and community policy and programs, as well as providing expert policy advice to Mayor and City Council
- CARP plan adopted December 2018 was developed by external stakeholders and requires a departmental co-lead for all priority areas; sustainability office engaged departments that would be impacted in advance of City Council vote to incorporate feedback
- Strong support from City Manager, City Council, and community
- Sustainability Coordinator advised that sustainability offices do not need large budgets or extensive staffing to be successful; ideal structure could be two staff people, two or three interns, and remaining resources distributed with input across all other departments implementing sustainability work
 - Has sought to expand capacity of other office before his own to ensure work can be carried out effectively

Sustainability Program Summary

Climate Commitments

As part of its [Climate Action and Resilience Plan Draft](#), the City of Evanston’s current climate commitment is to achieve carbon neutrality by 2050. In previous climate action plans and reports the City of Evanston had set previous goals to reduce emissions to 7% below 1990 levels by [2012](#), and to

achieve a 20% total community-wide emissions reduction by [2016](#), respectively. The City of Evanston is a member of Mayors for 100% Clean Energy and the Mayors National Climate Action Agenda.

Existing Reports

- [Climate Action and Resilience Plan Draft \(September 2018\)](#)-This Draft Climate Action and Resiliency Plan sets forth the goal of achieving carbon neutrality for the City of Evanston by 2050, in addition to the goal of building city-level climate resilience. It details actions the City of Evanston plans to take in each of these areas, and contains a separate section on implementation, accountability, and partnerships as well as commitments from large employers in Evanston such as Presbyterian Homes, Rotary International, and Northwestern University to assist in the plan’s implementation.
- [Evanston Livability Plan Final Report \(2017\)](#)-This report updates and evaluates the Evanston Livability Plan established in 2013. It outlines their overall success as well as how they fell short in hitting their 20% goal while achieving a 19% reduction. Evanston indicates that its success was driven by its Community Choice Aggregation (CCA) program, which supplies 100% green power to participating residents and small businesses. The City also indicated that it fell just short of its 20% reduction goal due to attrition in the program and some accounts being omitted under the first aggregation agreement.
- [Evanston Livability Plan \(2013\)](#)-This plan builds upon the City’s initial emission reduction accomplishments (pursuant to its 2008 Climate Action Plan) to achieve a 20% reduction in GHG emissions from 2005 levels by 2016. It outlines a five-part strategy for doing so, including residential green power, business green power, building retrofits, transportation change, and “city & other major institutions”, and outlines specific strategies in each of these focus areas.
- [Evanston Climate Action Plan \(November 2008\)](#). This Climate Action Plan was Evanston’s first Climate Action Plan, created in response to their signing of the US Mayors Climate Protection Agreement. This plan sought to reduce their emissions to 7% below 1990 level by 2012, which required a 13% total reduction from 2008 levels. It outlines more than 200 strategies in nine different focus areas (transportation & land use, energy efficiency & buildings, renewable energy resources, waste reduction & recycling, forestry, prairie & carbon offsets, food production and distribution, policy & research, education & engagement, and communications & public relations).
 - The City of Evanston released CAP progress reports for the [first year](#) following the plan, as well as in [2011](#) and [2012](#)

Current Programs

As part of its current climate commitment, the City of Evanston is undertaking a range of transportation and building efficiency measures, including expansion of EV infrastructure, the adoption of zero net energy building codes, and the implementation of a 100% renewable energy goal by 2035. Additionally, they are implementing a 75% waste diversion goal by 2035 and are undertaking measures to restore and expand its greenspace and natural areas. Information on specific initiatives and programs can be found in the table below.

CADMUS

Sector	Area	Summary
Transportation	Multimodal	<p>As part of its Climate Action and Resilience Plan Draft, the City of Evanston aims to reduce vehicle miles traveled by “increasing trips made by walking, bicycling, and transit”. To do this, the city seeks to implement its Multimodal Plan, Bicycle Plan, Public Health Plan, and Complete Streets Policy, as well as provide bicycle training to residents. Additionally, it seeks to build out convenient and safe bicycle parking, as well as provide incentives for development projects that include transportation demand-management strategies. Finally, they have a robust public transit system and a shared use mobility center resource that allows residents to access a map of Evanston’s shared transport resources.</p> <p>More information: City of Evanston Climate Action and Resiliency Plan Draft</p>
	Electric Vehicles	<p>As part of its Climate Action and Resilience Plan Draft, the City of Evanston aims to increase the use of electric vehicles. In pursuit of this goal, the City of Evanston is seeking to incentivize EV charging infrastructure, partner with fleet operators and transit providers to work towards a 100% EV goal by 2035. Additionally, they seek to implement community education initiatives for EVs to increase residential usage.</p> <p>More information: City of Evanston Climate Action and Resiliency Plan Draft</p>
Buildings	New Construction and Codes	<p>As part of its Climate Action and Resilience Plan Draft, the City of Evanston aims to reduce building energy consumption by 35% from 2005 level by 2035. In pursuit of this goal, the city seeks to develop a net-zero transition strategy for building standards and require net-zero building codes for residential and commercial new construction by 2025.</p> <p>More information: City of Evanston Climate Action and Resiliency Plan Draft</p>
	Existing Buildings and Energy Conservation	<p>As part of its Climate Action and Resilience Plan Draft, the City of Evanston aims to reduce building energy consumption by 35% from 2005 level by 2035. In pursuit of this goal, the city seeks to require net-zero greenhouse gas emissions codes for building retrofits by 2025. Additionally, they seek to adopt policies that “require building retro-commissioning for larger building types.”</p> <p>Additionally, the City of Evanston seeks to implement a PACE financing program for residential and non-residential energy efficiency upgrades. In addition, they seek to include energy audits as part of their building permit approval processes for modifications and additions. Additionally, they seek to implement an energy performance transparency program.</p> <p>More information: City of Evanston Climate Action and Resiliency Plan Draft</p>

	Thermal Electrification	No information readily available upon our review.
	Land Use Policy	As part of its Climate Action and Resilience Plan Draft, the City of Evanston aims to preserve and restore Evanston’s “urban canopy, natural areas, native vegetation and green space”. In pursuit of this goal, they are seeking to prioritize land protection and green space expansion. More information: City of Evanston Climate Action and Resiliency Plan Draft
Energy	Resilient Supply	No Information available upon our review.
	Renewables and Low Carbon Sources	As part of its Climate Action and Resilience Plan Draft, the City of Evanston aims to achieve 100% renewable energy for “all properties in Evanston” by 2035. In pursuit of this goal, the City seeks to support CCA and expanding their CCA program reach, support community solar, evaluate energy options for those residents not eligible for aggregation, and create an education program for commercial property owners. In addition, they seek to implement a sustainable business recognition program with renewable energy usage as a focal point. More information: City of Evanston Climate Action and Resiliency Plan Draft
Circular Economy/Waste	Waste Reduction	As part of its Climate Action and Resilience Plan Draft, the City of Evanston aims to increase their waste diversion rate to 50% by 2020 and 75% by 2035 from 2011 levels. In pursuit of this goal, the City of Evanston seeks to create a Zero Waste Strategic Plan that will outline specific actions. Proposed actions include requiring retailers and restaurants to divert their unsold food as well as designate zero-waste coaches within their staff and eliminate single-use plastics by 2025. Additionally, they seek to require recycling at all properties and provide equal access to waste diversion services, as well as update and revise their Disposable Plastic Shopping Bag Ban. More information: City of Evanston Climate Action and Resiliency Plan Draft
	Habitat Protection	As part of its Climate Action and Resilience Plan Draft, the City of Evanston aims to preserve and restore Evanston’s urban canopy, natural areas, native vegetation and green space, and cites habitat protection as a primary motivator for this goal. In pursuit of this goal, the city seeks to prioritize natural area conservation and expansion throughout the city, adopting a tree preservation ordinance, and prioritizing the planting of native plant/tree species. More information: City of Evanston Climate Action and Resiliency Plan Draft
Climate Resilience		The City of Evanston incorporated resiliency measures into its Climate Action and Resiliency Plan in their own section. These included the implementation of green infrastructure as a stormwater management strategy, mitigation of extreme heat

CADMUS

		<p>through the establishment of cooling centers and the planting of shade trees, community education for climate and emergency preparedness, and the protection of vulnerable populations through building retrofits, financial assistance, outreach, and the promotion of alternate transit modes as a fuel price buffer measure, among other related prospective actions.</p> <p>More information: City of Evanston Climate Action and Resiliency Plan Draft</p>
Inclusion and Outreach	Equitable Programs	<p>Evanston’s Climate Action and Resilience Plan Draft has an Implementation, Accountability, and Partnerships section. This details partnership in their policy development process, including their Equity and Empowerment Commission, in addition to a wide variety of other boards, committees, and commissions, many of which contain community members. Additionally, the plan cites equity as a guiding principle from the outset and says that its definition of “equity-centered” has been approved by the Office of Equity and Empowerment.</p> <p>More information: City of Evanston Climate Action and Resiliency Plan Draft City of Evanston Equity and Empowerment Commission</p>

Notable Partnerships (if any)

The City of Evanston has secured [commitments](#) from large employers in the city such as Presbyterian Homes, Rotary International, and Northwestern University to assist in the implementation of their Climate Action and Resiliency Plan. Additionally, the City is showcasing what these employers have already accomplished towards the City’s goals.

Fort Collins, CO

City Characteristics

Population	165,080
Growth Profile	Fort Collins has grown 14.1% between 2010 and 2017.
Emissions Profile	Emissions have been reduced 17% since 2005 .

Key Takeaways from Benchmarking Interview

Sustainability Office Summary

Office Location	Sustainable Service Area (one of 7 Service Areas in the City)
Staffing	30 FTE, 10 PTE (within Environmental Sustainability Office 14 FTE, 6-10 PTE)
Structures for inter-agency collaboration	<p>Fort Collins has a comprehensive team structure which is utilized to advance Service Area priorities; includes the following, raised during interview:</p> <ul style="list-style-type: none"> • City Executive Leadership Team (City Manager, Deputy City Manager, Service Area Directors) • Lead Team (Department Directors, communication and financial leads) • Integration Team (voluntary, can bring topics forward for discussion) • Interdepartmental Sustainability Team • Business Engagement Team • Climate Economy Team • Climate Action Plan Implementation Team (10 sub-teams)
Structures for community engagement	Community Advisory Committee
Funding sources referenced during interview	Biannual budget
Metrics referenced during interview	Climate Action dashboard to be launched in January

- Fort Collins takes a triple bottom line approach to their Sustainability Service Area; office includes:
 - Environmental Sustainability
 - Economic Sustainability
 - Social Sustainability
- City has extensive teaming structure; provides ample opportunity to collaborate and offer opportunities to engage, but impacts capacity of staff to carry out work in a sustainable manner
- City Manager and Council are supportive; do hear questions of cost implications and balance with other priorities

- Director of Environmental Services recommended focusing on organizational change management, acknowledging that even the best plan ultimately rests on the ability of staff to implement it
- Highlighted USDN as a resource

Sustainability Program Summary

Climate Commitments

The City of Fort Collins has [committed](#) to carbon neutrality by 2050. In pursuit of this goal, they have set the sub-goals of reducing greenhouse gas emissions to 20% below 2005 levels by 2020, and 80% below 2005 levels by 2030. The City of Fort Collins is a member of the Mayors National Climate Action Agenda.

Existing Reports

- [Climate Action Plan 2017 Community Carbon Inventory \(2017\)](#)-This report provides a second progress report on meeting its carbon reduction goals. It highlights the areas of emissions in which progress has been made, as well as specific actions taken in a 2-page infographic format.
- [Climate Action Plan-2016 Community Carbon Inventory \(2016\)](#)- This report provides a first progress report on meeting its carbon reduction goals. It details the areas of emissions in which progress has been made, as well as highlighted actions in these areas.
- [Climate Action Plan Framework \(2015\)](#). This framework for climate action details the City of Fort Collins’ carbon reduction goals and associated strategies in the areas of buildings, advanced mobility, energy supply and delivery, and waste reduction/materials regeneration. Additionally, it contains sections on triple bottom line considerations (including increased resiliency and support for city strategic plan objectives), what this plan means for the community, near-term actions, and accountability and associated metrics for achieving the goals set out in the plan.

Current Programs

As part of its carbon reduction goals, the City of Fort Collins outlines specific strategies in the areas of buildings, advanced mobility, energy supply and delivery, and waste reduction and materials generation in its [2015 Climate Action Plan Framework](#), and report progress on these goals in its [2016](#) and [2017](#) Community Carbon Inventories. Specific programs it is implementing in pursuit of its carbon neutrality goal can be found in the table below.

Sector	Area	Summary
Transportation	Multimodal	As part of its Climate Action Plan Framework, the City of Fort Collins has adopted the goal of reducing vehicle miles traveled by 29%. In pursuit of this goal, the city seeks to shift land use patterns to reduce driving as a primary transportation mode. Its strategies for doing this include the pursuit of a “complete streets” policy, evaluation of their parking requirements, and evaluation of retrofitting, charging for, and reducing on-street parking. Additionally, they seek to expand their mass transit network, offer their public transit data to third-party

		<p>developers for web-based or mobile transit apps, as well as to grow car share and ride share programs. As of their 2017 Community Carbon Inventory, the City of Fort Collins had achieved a 10% reduction in vehicle miles traveled since 2005, and the percentage of trips taken by alternate transportation modes had hit 22%. Additionally, they plan to offer bus service 365 days a year when feasible.</p> <p>More information: City of Fort Collins Climate Action Plan Framework</p>
	Electric Vehicles	<p>As part of its Climate Action Plan Framework, the City of Fort Collins has adopted the goal of having one in two new passenger cars purchased be an electric vehicle by 2030. In pursuit of this goal, the City of Fort Collins seeks to implement community outreach and education on electric vehicles, expand its EV charging infrastructure, offer incentives for would-be owners of EVs, provide time-of-use pricing to incentive EV charging during off-peak hours, and provide a central market to buy and sell used EV batteries. Additionally, they are undertaking a variety of strategies to electrify commercial and municipal fleets, including optimizing EV driving schedules, and the facilitation of access to third-party leasing agents who can provide EV services as well as the alignment of city budgeting under a single point of contact for fleet purchasing/procurement and operational expense decisions.</p> <p>More information: City of Fort Collins Climate Action Plan Framework</p>
Buildings	New Construction and Codes	<p>As part of its Climate Action Plan Framework, the City of Fort Collins has adopted the goal of a 3% annual reduction in building energy use by 2030. In pursuit of this goal, they are seeking to continue to adopt energy codes for residential and commercial buildings in addition to local requirements to exceed these standards. Additionally, they seek to engage local builders and contractors to determine best practices and strategies for meeting and exceeding the codes the city adopts, and reward builders with incentive programs for exceeding their codes. Finally, they want to encourage demand response for new construction by establishing variable energy pricing.</p> <p>More information: City of Fort Collins Climate Action Plan Framework</p>
	Existing Buildings and Energy Conservation	<p>As part of its Climate Action Plan Framework, the City of Fort Collins has adopted the goal of a 3% annual reduction in building energy use by 2030. In pursuit of this goal, they are seeking to improve their efficiency programs, enable homeowners to participate in energy efficiency upgrades through the development of financing options, the promotion of energy efficiency technologies through building and home owner outreach and incentives, and the implementation of</p>

		<p>requirements for the communication of a home’s efficiency. Additionally, the City of Fort Collins seeks to collect and publicize data on building energy use. Finally, the City wants to raise standards for Energy Use Intensity in commercial buildings. As of their 2017 Community Carbon Inventory, community electricity use was down by 16% since 2005.</p> <p>More information: City of Fort Collins Climate Action Plan Framework City of Fort Collins 2017 Community Carbon Inventory</p>
	Thermal Electrification	<p>As part of its Climate Action Plan Framework the City of Fort Collins seeks to shift heating loads to biofuels, geothermal, and electrification with solar/wind power sources. In pursuit of this strategy, they seek to develop utility programs that encourage fuel switching for renovation and replacements, as well as the “adoption of standard and/or codes for major renovations to increase use of non-natural gas heating loads.” As of their 2017 Community Carbon Inventory, natural gas use had decreased by 15% per capita since 2005.</p> <p>More information: City of Fort Collins Climate Action Plan Framework City of Fort Collins 2017 Community Carbon Inventory</p>
	Land Use Policy	<p>As part of its Zero Waste goal in its Climate Action Plan Framework, the City of Fort Collins outlines a carbon sequestration strategy that includes the preservation and conservation of lands that can serve as carbon sinks. This includes the supporting of initiatives that develop and preserve greenspace and wildlife habitats, wetlands, and watersheds.</p> <p>More information: City of Fort Collins Climate Action Plan Framework</p>
Energy	Resilient Supply	No information readily available upon our review.
	Renewables and Low Carbon Sources	<p>As part of its Climate Action Plan framework, the City of Fort Collins has adopted three goals: that carbon intensity of utility-scale electricity will be 80% lower in 2030 than 2005 level, that 50% of new construction in 2030 will have enough solar PV for net zero energy use, and that 22% of existing homes and 50% of existing businesses will have installed solar.</p> <p>In pursuit of these complementary goals, the City of Fort Collins seeks to drive solar adoption on both residential and commercial scale. It is doing so through the expansion of a Solar Power Purchase Program, expansion of community solar options, and the adoption of commercial PACE for solar PV installation. Additionally, the city seeks to undertake community outreach and education for residential solar PV in addition to the provision of funding and incentives, as well as the consideration of an Integrated Utility Services program in</p>

		<p>which consumers can finance utility-facilitated solar purchases with minimal impacts on their utility bills.</p> <p>As of their 2017 Community Carbon Inventory, the City of Fort Collins had adopted hit 10 MW of solar from over 1000 distinct systems. Additionally, the City aims to install 150 MW of wind energy capacity to boost their renewable energy resources to above 50% of their total portfolio.</p> <p>More information: City of Fort Collins Climate Action Plan Framework City of Fort Collins 2017 Community Carbon Inventory</p>
Circular Economy/Waste	Waste Reduction	<p>As part of its Climate Action Plan framework, the City of Fort Collins has adopted the goal of increasing waste diversion to 75% by 2020, 90% by 2025, and zero waste by 2030. There are a range of actions the City is undertaking in pursuit of this goal, ranging from the completion of a community recycling center, advancing municipal readiness to engage in waste-to-clean-energy activities, seeking funding support for a resource recovery park, coordination with regional land conservation efforts, as well as the supporting of private sector business development in areas such as food scraps composting and glass sorting. Finally, they seek to implement several community outreach and education initiatives pertaining to zero waste, including piloting zero waste strategies through their EcoDistrict and Neighborhood Scale Sustainability program. As of their 2017 Community Carbon Inventory, they had achieved a 70% reduction in Solid Waste, and all major grocers in the city had composting.</p> <p>More information: City of Fort Collins Climate Action Plan Framework City of Fort Collins 2017 Community Carbon Inventory</p>
	Habitat Protection	<p>As part of its Zero Waste goal in its Climate Action Plan Framework, the City of Fort Collins outlines a carbon sequestration strategy that includes the preservation and conservation of lands that can serve as carbon sinks. This includes the supporting of initiatives that develop and preserve greenspace and wildlife habitats, wetlands, and watersheds.</p> <p>More information: City of Fort Collins Climate Action Plan Framework</p>
Climate Resilience		<p>The City of Fort Collins committed to releasing a full municipal adaptation plan by the end of 2018.</p> <p>More information: https://www.fcgov.com/climateadaptation/</p>
Inclusion and Outreach	Equitable Programs	<p>As part of its Climate Action Plan framework, the City of Fort Collins outlines the triple bottom line considerations of its various climate goals which includes community health and well-being. Additionally, the plan itself contains a number of community outreach, education, and involvement strategies in</p>

		each of its focus areas. Finally, its strategies include financing for LMI households, such as PACE. More information: City of Fort Collins Climate Action Plan Framework
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Notable Partnerships (if any)

Fort Collins collaborates regionally on electricity distribution and watershed planning.

Palo Alto, CA

City Characteristics

Population	67,108
Growth Profile	The City of Palo Alto has grown 4.97% between 2010 and 2017.
Emissions Profile	The City of Palo Alto had reduced emissions by 36% from 1990 levels in 2016.

Key Takeaways from Benchmarking Interview

Sustainability Office Summary

Office Location	Undergoing transition; previously located in City Manager’s Office, Department of Public Works, and as standalone office
Staffing	0.75 FTE
Structures for inter-agency collaboration	<p>Palo Alto uses a three-tiered structure:</p> <ul style="list-style-type: none"> • Sustainability Advisory Board (includes City Manager) • Sustainability Leadership Team • Sustainability Working Groups <ul style="list-style-type: none"> ○ Produces quarterly report on KPIs for presentation to Sustainability Advisory Board
Structures for community engagement	Community Environmental Action Partnership (former engagement) CoolBlock Challenge
Funding sources referenced during interview	State funding Most funding allocated to departments, not office itself
Metrics referenced during interview	Electrification percentage, single-occupancy vehicle mode share, transit ridership, commute benefit participants, PCA water use, recycling, EV penetration

- Palo Alto’s Chief Sustainability Officer recently left, and it is not anticipated that the position will be backfilled; city is in the process of determining the best location for the remaining staff member
- Office has been located in a range of offices and departments and expressed that there are tradeoffs of each that should be considered
- City has a three-tiered sustainability structure through which they create strong accountability; progress is reporting quarterly to the City Manager
 - Sustainability staff does not need attend all of the meetings; they operate successfully independently
- Palo Alto’s CoolBlock Challenge engages households on a residential block to reduce carbon
 - In the second year of piloting the program, 88 households are engaged and have saved an average of 7.1 tons of carbon per household per year
- The city has achieved carbon neutral electricity and natural gas through purchasing offsets

- See this as a bridge solution
- Palo Alto is looking at ways to address transportation emissions, which are 72 percent of their remaining emissions
 - Considering how to reduce single occupancy vehicle trips downtown, improving bike infrastructure, increasing first and last mile connectivity, implementing parking management strategies, and decreasing city fleet fuel consumption and idling
- Strong support comes from the City Manager, City Council, and community

Sustainability Program Summary

Climate Commitments

The City of Palo Alto has [committed](#) to an 80% reduction in greenhouse gas emissions from 1990 levels by 2030. Palo Alto is a member of Mayors for 100% Clean Energy and the Mayors National Climate Action Agenda.

Existing Reports

- [2018-2020 Sustainability Implementation Plan \(2018\)](#)-This follow-up to the City’s initial Sustainability and Climate Action Plan provides implementation roadmaps for CO2 emissions reduction in four key action areas: Energy, Mobility, Electric Vehicles, and Water.
- [Sustainability and Climate Action Plan Framework \(2017\)](#)-This planning document is the City’s initial framework for achieving its “80x30” goal. It outlines specific action items in the areas of mobility, building energy efficiency and electrification, zero waste and the circular economy, water management, sea level rise response, municipal operations, natural environment protection, utilities, community behavior, information systems, and financing strategies.

Current Programs

In pursuit of its carbon reduction goal the City of Palo Alto has outlined a number of initiatives it plans to undertake in its climate action plan and sustainability implementation plan documents. These initiatives include the expansion of its EV charging infrastructure, the shifting of land use to reduce vehicle miles traveled (VMT), the requirement of net zero buildings, and the implementation of a Zero Waste goal, among many other complimentary programs. Information on specific planned initiatives is outlined in the table below.

Sector	Area	Summary
Transportation	Multimodal	As part of its 2018-2020 Sustainability Implementation Plan, the City of Palo Alto seeks to reduce single-occupancy vehicle (SOV) travel as well as increase the convenience of alternate transit modes. It plans to fund their Transportation Management Administration to reduce SOV trips downtown by 30%, increase bicycle boulevard mileage by 13.1 miles, explore parking management strategies, evaluate the use of city vehicles as rideshares, explore transit-oriented

		<p>development, and explore “re-establishing and expanding” their citywide bike share problem. Palo Alto plans to evaluate this through SOV commute mode share, transit ridership, and commute benefits participation.</p> <p>More information: City of Palo Alto 2018-2020 Sustainability Implementation Plan</p>
	Electric Vehicles	<p>As part of its 2018-2020 Sustainability Implementation Plan, the City of Palo Alto seeks to “accelerate EV penetration” and make electric vehicles cost-effective in the city. In support of these goals, it plans to “evaluate incentives, outreach, policies, and financing options to stimulate charging infrastructure and EV ownership/use”. Additionally, Palo Alto plans to develop a plan for expanding EV charging infrastructure, expand EV deployment in the municipal fleet, and expand EV community outreach, among many other potential measures.</p> <p>More information: City of Palo Alto 2018-2020 Sustainability Implementation Plan</p>
Buildings	New Construction and Codes	<p>As part of its 2016 Sustainability and Climate Action Plan Framework, the city of Palo Alto has adopted the goal of reducing emissions and energy consumption “through energy efficiency and design”. For new construction, they plan to require efficiency standard that exceed state minimums, require Net Zero buildings “in advance of State standards”, and participate in the formation of Net Zero Energy Districts.</p> <p>More information: City of Palo Alto 2016 Sustainability and Climate Action Plan Framework</p>
	Existing Buildings and Energy Conservation	<p>As part of its 2016 Sustainability and Climate Action Plan Framework, the city of Palo Alto has adopted the goal of reducing emissions and energy consumption “through energy efficiency and design”. The City plans to achieve savings of 2-5% by 2020. The City plans to “examine the life-cycle of buildings and determine appropriate triggers in the permitting process to mandate deeper efficiency retrofits for existing buildings”. Additionally, as part of its 2018-2020 Sustainability Implementation Plan, Palo Alto seeks to develop building benchmarking requirements, and establish commissioning and retro-commissioning programs. The City plans to evaluate these initiatives through measuring building energy efficiency.</p> <p>More information: City of Palo Alto 2018-2020 Sustainability Implementation Plan</p>

		City of Palo Alto 2016 Sustainability and Climate Action Plan Framework
	Thermal Electrification	No information readily available upon our review.
	Land Use Policy	As part of its 2016 Sustainability and Climate Action Plan framework, the city of Palo Alto discusses the adoption of land use policies that support its mobility goals. This involves increasing housing densities, increasing “areas under existing maximum zoning rules,” regulating employment densities, and implementing commercial downzoning. More information: City of Palo Alto 2016 Sustainability and Climate Action Plan Framework
Energy	Resilient Supply	No information available upon our review.
	Renewables and Low Carbon Sources	As part of its 2018-2020 Sustainability Implementation Plan, the City of Palo Alto plans to encourage voluntary and mandated electrification of natural gas appliances and evaluate this through electrification percentage. More information: City of Palo Alto 2018-2020 Sustainability Implementation Plan
Circular Economy/Waste	Waste Reduction	As part of its 2016 Sustainability and Climate Action Plan framework, the City of Palo Alto has adopted the goal of 95% waste diversion by 2030 with the goal of achieving Zero Waste. In pursuit of this goal the city of Palo Alto plans to establish new programs for waste reduction, improving existing ones, and increase Extended Producer Responsibility for Waste. Additionally, the city seeks to “minimize energy use and pollutant formation from waste collection, transportation, and processing.” In pursuit of this goal the city plans to lower the carbon intensity of their waste collection fleet, as well as increase the efficiency of their processing facilities. More information: City of Palo Alto 2016 Sustainability and Climate Action Plan Framework
	Habitat Protection	As part of its 2016 Sustainability and Climate Action Plan framework, the City of Palo Alto has adopted the complimentary goals of restoring the resiliency of their natural environment and maximizing carbon sequestration and storage in the natural environment. In pursuit of these goals, Palo Alto plans to deploy green infrastructure, adapt public lands to changing climatic regimes, and manage public lands and their many tree species and soils to maximize their ecosystem services. More information:

		City of Palo Alto 2016 Sustainability and Climate Action Plan Framework
Water Use	Water Use Reduction	<p>As part of its 2018-2020 Sustainability Implementation plan, the City of Palo Alto seeks to: reduce inefficient water consumption, ensure adequate water supply, and protect the canopy, creek, groundwater, and the bay. In pursuit of these goals, the city plans to explore conducting a cost-benefit analysis for non-potable water sources as a supplement to potable sources in addition to a high-level water balance chart, into a single planning document. Additionally, the City of Palo Alto seeks to develop programs and ordinances to maximize water efficiency and facilitate the use of non-traditional water sources. Finally, Palo Alto seeks to develop a Green Storm Water Infrastructure Plan and reduce the salinity of Palo Alto’s recycled water to increase desirability of use.</p> <p>More information: City of Palo Alto 2018-2020 Sustainability Implementation Plan</p>
	Climate Resilience	<p>The City of Palo Alto has a Climate Adaptation and Resilience Working Group that will work on an implementation plan in this area for a future iteration of the Sustainability Implementation Plan. It is not a key focus area currently.</p> <p>More information: City of Palo Alto Sustainability and Climate Action Plan Landing Page</p>
Inclusion and Outreach	Equitable Programs	<p>As part of its 2016 Sustainability and Climate Action Plan framework, the City of Palo Alto has adopted the improvement of social equity as a guiding principle. Additionally, the plan itself incorporates strong community outreach, engagement, and involvement in its varying initiatives.</p> <p>More information: City of Palo Alto 2016 Sustainability and Climate Action Plan Framework</p>

Notable Partnerships (if any)

None were noted during interview.

Santa Monica, CA

City Characteristics

Population	92,306
Growth Profile	Santa Monica grew 2.9% between 2010 and 2017
Emissions Profile	Emissions as of 2016 had dropped 20% below 1990 levels .

Key Takeaways from Benchmarking Interview

Sustainability Office Summary

Office Location	Department of Public Works; previously in CMO
Staffing	18 FTE
Structures for inter-agency collaboration	Leadership Team Sustainability Advisory Team (self-nominated) Capital Improvement Plan budget applications Workplans tied to Sustainable City Plan
Structures for community engagement	Seven-member Task Force advises City Council Sustainable Quality Awards
Funding sources referenced during interview	Not discussed
Metrics referenced during interview	Publicly available data at data.sustainablesm.org

- Key factor in success if cultivating community, having a plan, clear delineation of goals, targets, and indicators
 - Considers vision for 2020, 2030, 2050 the most important policy advancing sustainability
- Noted tradeoffs between locations in different offices and remarked that, while it might work for some, an embedded and decentralized system unlikely to work in Santa Monica because departmental staff is capacity constrained
- Department workplans are tied to outcomes in the sustainable city, which are reported on to city leadership team. There is a strong focus on tracking success via key metrics, which are published online.
- Sustainability has strong support from City Council and community
- Triple bottom line approach to sustainability is growing, any new sustainable city plans must be oriented in this manner. The interviewee noted that any new policy initiative should be motivated by one of the three bottom lines, and in the execution of that initiative, the city should be sure to adequately address the other two bottom lines.
- Deputy Sustainability Officer recommended organizing peer to peer conversations for city leadership, noting there is often competitive spirit, as well as focusing on achievable wins

Sustainability Program Summary

Climate Commitments

The City of Santa Monica had previously [committed](#) to a 15% reduction in carbon emissions below 1990 levels by 2015. An updated Climate Action and Adaptation Plan is presently under development that will include an updated climate commitment and associated strategies. The City of Santa Monica is a member of the Mayors National Climate Action Agenda.

Existing Reports

- An updated Climate Action and Adaptation Plan is currently under development.
- [15x15 Climate Action Plan \(2013\)](#)-This Initial Climate Action Plan, written by the City of Santa Monica, details 15 actions that it took to reduce emissions by 15% below 1990 levels. It has action items in the following focus areas: energy use and generation, waste reduction and recycling, transportation and mobility, open space and land use, water conservation and efficiency, local food and agriculture, municipal operations, and climate mitigation and adaptation.
- [Sustainable City Plan \(2009\)](#)-This plan, written by the City of Santa Monica, guides sustainability planning in Santa Monica. It contains nine distinct goal areas (Resource Conservation, Environmental and Public Health, Transportation, Sustainable Local Economy, Open Space and Land Use, Housing, Community Education and Civic Participation, Human Dignity, and Arts and Culture) with specific goals and action items under each.

Current Programs

As part of their previous carbon reduction goal, the City undertook specific actions in several areas including expanding their EV charging infrastructure, reducing building energy use by 1 million kWh annually, diversion of 80% of waste from landfills, and increasing its solar capacity by 500 kWh annually. Additionally, the City of Santa Monica has ongoing work in these areas as part of its Sustainable City Plan. An updated Climate Action and Adaptation Plan is presently under development that will include an updated climate commitment and associated strategies. Specific programs the City of Santa Monica has and is currently undertaking in pursuit of carbon reduction are outlined in the “current programs” table below.

Sector	Area	Summary
Transportation	Multi-modal	<p>The City of Santa Monica is currently implementing incentives to use public transportation. These include free passes for Santa Monica College Students and Staff. Additionally, Santa Monica has implemented a bikeshare initiative.</p> <p>As part of its 15x15 Climate Action Plan, the City sought to increase its biking and walking mode share to 15% and reduce VMT by 3,000.</p> <p>Additionally, as part of its Sustainable City Plan, the City of Santa Monica has set the goal of creating a multi-modal transportation system and reducing VMT by facilitating a reduction in automobile dependency. It</p>

		<p>plans to evaluate these goals by: modal split, VMT, percentage of residents that intentionally do not drive, percent of households within</p> <p>More information: City of Santa Monica-Transportation Department City of Santa Monica 15x15 Climate Action Plan</p>
	Electric Vehicles	<p>The City of Santa Monica is implementing a plan to triple EV charging infrastructure by 2020. Additionally, they have adopted an EV Action Plan with the goal of reaching 15% EV usage in Santa Monica. This plan includes expansion of charging infrastructure for multi-unit dwellings and workplaces, updating parking policies to accommodate chargers, and the development of community outreach and education for residents and businesses.</p> <p>As part of its 15x15 climate action plan, the City sought to install 220 additional EV chargers throughout the city.</p> <p>More information: City of Santa Monica-Transportation Department City of Santa Monica Electric Vehicle Action Plan</p>
Buildings	New Construction and Codes	<p>The City of Santa Monica is implementing a new energy reach code to ensure that all new low-rise residential building will use 15% less energy than the allowed California Energy Code energy budget. Additionally, there are more than a dozen structures in the city that have achieved LEED certification. Finally, as part of its Sustainable City Plan, the City of Santa Monica has set the 2020 targets of having 100% of new municipal buildings achieve LEED GOLD Certification.</p> <p>More information: City of Santa Monica-Build Green City of Santa Monica Sustainable City Plan City of Santa Monica 15x15 Climate Action Plan</p>
	Existing Buildings and Energy Conservation	<p>As part of its Sustainable City Plan, The City of Santa Monica has adopted energy reduction targets of 10% for municipal and citywide energy use by 2020. The City of Santa Monica is implementing a number of rebate programs for energy efficient products in partnership with Southern California Edison and Santa Monica Water. It intends to evaluate these in terms of total use as well as overall efficiency.</p> <p>Additionally, as part of its 15x15 Climate Action Plan, the City sought to reduce energy use in existing buildings by 1 million kWh annually.</p> <p>More information: City of Santa Monica-Rebates City of Santa Monica Sustainable City Plan City of Santa Monica 15x15 Climate Action Plan</p>
	Thermal Electrification	No information readily available upon our review.
	Land Use Policy	As part of its Sustainable City Plan, the City of Santa Monica has adopted the goal of implementing “land use and transportation planning and policies to create compact mixed-use projects” for encouragement of

		<p>multi-modal transit. This involves expanding the percent of residential developments that are within ¼ mile of transit, as well as expanding the number of acres of open space.</p> <p>More information: https://www.smgov.net/uploadedFiles/Departments/OSE/Categories/Sustainability/Sustainable-City-Plan.pdf https://www.smgov.net/uploadedFiles/Departments/OSE/Home_Page_Item_with_Image/CAP_Final.pdf</p>
Energy	Resilient Supply	<p>As part of its Sustainable City Plan, the City of Santa Monica is incorporating distributed generation as a metric for evaluating its solar goals (outlined below).</p> <p>https://www.smgov.net/uploadedFiles/Departments/OSE/Categories/Sustainability/Sustainable-City-Plan.pdf</p>
	Renewables and Low Carbon Sources	<p>As part of its Sustainable City Plan, the City of Santa Monica has set a 2020 target of 50% renewable energy for the city. Additionally, it has set the goals of 7.5 MW of solar installed as well as 1 MW of solar on city-operated facilities. It intends to evaluate these goals in terms of total use, and total use from clean distributed generation.</p> <p>Additionally, as part of its 15x15 Climate Action Plan, the City sought to increase its solar capacity by 500 kW annually.</p> <p>More information: City of Santa Monica Sustainable City Plan City of Santa Monica 15x15 Climate Action Plan</p>
Circular Economy/ Waste	Waste Reduction	<p>As part of its Sustainable City Plan, the City of Santa Monica has adopted the 2020 target of an 85% waste diversion rate, and a goal to reduce per capita waste generation in the city by 2.4 lbs per person per day. The city intends to evaluate these targets in terms of amount generated, amount landfilled, and amount diverted.</p> <p>Additionally, as part of its 15x15 Climate Action Plan, the City sought to divert 80% of waste from landfills by 2015.</p> <p>More information: https://www.smgov.net/uploadedFiles/Departments/OSE/Categories/Sustainability/Sustainable-City-Plan.pdf</p>
	Habitat Protection	<p>As part of its Sustainable City Plan, the City of Santa Monica has adopted a number of land use related goals for habitat protection purposes in addition to other related co-benefits (such as carbon sequestration). These include expanding the number of acres of open space, as well as regenerating and maintaining the urban forest and landscape with regionally appropriate species.</p> <p>The goal of regenerating the urban forest was reiterated in the 15x15 Climate Action Plan.</p> <p>More information: City of Santa Monica Sustainable City Plan City of Santa Monica 15x15 Climate Action Plan</p>

Water Conservation		<p>As part of its 15 x 15 Climate Action Plan, the City of Santa Monica set the goal of reducing water demand by 200,000 gallons per day. Actions in pursuit of this goal included a robust community outreach and education initiative, in addition to rebates on water efficient fixtures.</p> <p>More information: City of Santa Monica 15x15 Climate Action Plan</p>
Climate Resilience		<p>The City of Santa Monica is present working on a comprehensive Climate Action and Adaptation Plan that will include resilience measures across sectors.</p> <p>More information: Santa Monica Climate Action and Adaptation Plan</p>
Inclusion and Outreach	Equitable Programs	<p>As part of its Sustainable City Plan, the City of Santa Monica has adopted the guiding principle that “environmental quality, economic health, and social equity are mutually interdependent”. Additionally, the Sustainable City Plan has a section titled “Community Education and Civic Participation” with an outreach and education agenda for equitable participation in the city’s sustainability programs, including participation in Community Sustainability Programs.</p> <p>More information: City of Santa Monica Sustainable City Plan</p>

Notable Partnerships (if any)

None were noted during interview.

Somerville, MA

City Characteristics

Population	81,360
Growth Profile	The City of Somerville has grown 7.46% between 2010 and 2017.
Emissions Profile	The City of Somerville reduced its emissions by 5% between 2014 and 2016.

Key Takeaways from Benchmarking Interview

Sustainability Office Summary

Office Location	Mayor’s Office
Staffing	3 FTE
Structures for inter-agency collaboration	Somerstat Informal collaboration Over half of all initiatives are implemented with partner
Structures for community engagement	Commission on Energy Use and Climate Change
Funding sources referenced during interview	General fund for staff Most funding is allocated to departments for implementation
Metrics referenced during interview	GHG and energy use

- Estimates the offer splits its time roughly 30 percent on municipal operations and 70 percent on community sustainability programs
- Role includes ongoing service delivery (e.g. monitoring recycling), long-range planning, and special programs that are time-limited and not intended to be long term (e.g. EV installation)
- Collaborates with agencies in three main ways:
 - Work as an internal consultant for departments who are implementing a new program or policy (i.e. EV fleet purchasing)
 - Identifying opportunities for other departments to pursue and advocating for the opportunity
 - Serving as coequal partners on an initiative
- Strong support across government and from community, but organizational change management remains challenging – dealing with bureaucratic impediments
- Has built momentum for funding increases
- Team does an annual strategy session to assess actions taken against mission and goals, as well as plan for the next year
- Office is working with USDN to create and equity framework
- Director of Office of Sustainability and Environment posed that it’s important to evaluate if you are a city that can benefit from putting yourself on a bigger stage (such as the Global Covenant)

or if you want to focus on internal work that may not look immediately like sustainability or climate change work; also important to prioritize when you have a small staff

Sustainability Program Summary

Climate Commitments

The City of Somerville in 2014 set the goal of achieving carbon neutrality by 2050. As a part of this goal, the city released the Somerville Climate Forward Plan in November 2018. The city of Somerville is a member of the Mayors National Climate Action Agenda.

Existing Reports

- [Somerville Climate Forward](#) (2018)-This initial Climate Action and Resilience Plan details specific actions that the City of Somerville seeks to undertake towards its carbon neutrality goal as well as climate resilience for the city (building on the findings of its Climate Change Vulnerability Assessment). It outlines climate action and resilience actions, implementation steps, and associated funding mechanisms in the areas of buildings, mobility, environment, community, and leadership (covered in the “current programs” section below) and provides an overall implementation timeline for the plan.
- [Carbon Neutrality Pathway Assessment Whitepaper](#) (2017)-This white paper, published in collaboration with AECOM, assesses actions that the City of Somerville might take in pursuit of achieving carbon neutrality by 2050 in the areas of building energy, transportation, and waste. It outlines specific goals in each of these areas, covered in the “current programs” section below.
- [Climate Change Vulnerability Assessment](#) (2017)-This report, published by the City Somerville, assesses vulnerability to climate change across sectors based on temperature, precipitation, flooding, and sea level rise projections. It identifies vulnerabilities to critical infrastructure and the natural environment, as well as social vulnerabilities such as public health. It identifies key priorities for the city and identifies rough options that the city might pursue for building resilience in these key priority areas.

Current Programs

In pursuit of its carbon neutrality and climate resilience goals, the City of Somerville has implemented the [Sustainaville](#) Initiative, which is the hub for its climate and sustainability planning. This initiative includes transportation, land use, waste reduction, energy efficiency, renewable energy, and climate resilience work. The City of Somerville released a whitepaper that assesses potential pathways towards its carbon neutrality goal. The white paper outlines a number of opportunities to reduce carbon emissions in the following: building energy, transportation, and waste. Specific programs it is undertaking in pursuit of its carbon neutrality goal and the various near and long-term carbon reduction opportunities assessed in the whitepaper are outlined in the “current programs” table below.

Sector	Area	Summary
Transportation	Multimodal	As part of its Somerville Climate Forward Plan, the City of Somerville set the goal of achieving “equitable low-carbon mobility”. As part of this they have the goals of improving bus reliability and trip times, improving and expanding bicycles infrastructure, and assessing their

		<p>parking policy and parking supply “to meet low-carbon mobility needs”. Specific actions it seeks to undertake include piloting bus-only lanes on Somerville routes, implementing a protected bike lane project, expanding the BlueBikes bikeshare, piloting removal of on-street parking to create dedicated bike and bus space, and reduction or elimination of minimum off-street parking requirements.</p> <p>Additionally, the City of Somerville assessed opportunities for a transit mode shift in favor of walking and bicycling as part of its 2017 Carbon Neutrality Assessment Whitepaper. They assessed the opportunity having 100% of new development taking place in transit-oriented developments by 2020 as well as 25% of VMT taking place in these developments. They calculated an associated GHG reduction potential of 3000 MT by 2020, with progressing reductions through 2050.</p> <p>Finally, the city of Somerville has ongoing planning initiatives relating to bicycles and pedestrians, including the expansion of its bicycle/pedestrian path network.</p> <p>More information: Somerville Climate Forward Sustainaville-Sustainable Transportation City of Somerville-Transportation and Infrastructure Planning for Bicycles City of Somerville Carbon Neutrality Pathway Assessment Whitepaper</p>
	Electric Vehicles	<p>As part of its Somerville Climate Forward Plan, the City of Somerville set the goal of developing a comprehensive EV charging infrastructure strategy. This will include permitting Level 1 and 2 EV charging stations by right, establishing minimum parking requirements for EV charging spaces, and developing a curbside EV charging pilot program in addition to exploring the feasibility of street light/utility pole EV charging stations as well as off-street parking utilization for overnight residential EV charging.</p> <p>Additionally, the City of Somerville assessed the opportunity for a transportation fuel switch to EVs as part of its 2017 Carbon Neutrality Assessment Whitepaper. It assessed the potential for 10% conversion by 2020, with future potentials of 40% by 2030 and 100% by 2050.</p> <p>Finally, the city is working to transition its fleet to electric/hybrid vehicles.</p> <p>More information: Somerville Climate Forward Sustainaville-Sustainable Transportation City of Somerville Carbon Neutrality Pathway Assessment Whitepaper</p>
Buildings	New Construction and Codes	<p>As part of its Somerville Climate Forward Plan, the City of Somerville aims to explore the feasibility of a net-zero energy or net-zero</p>

		<p>emissions performance standard for new development. Specific actions it seeks to undertake include incentivizing net-zero building construction, the provision of technical support to developers and builders, developing a database of local net-zero case studies, the convening of a Net Zero Building Task Force to build a consensus for more stringent building standards, and determining the phasing of new standards that would lead to net-zero buildings. Additionally, they seek to set progressive net-zero building standards for new municipal buildings. Each of these prospective actions result from opportunities assessed in its 2017 Carbon Neutrality Pathway Assessment Whitepaper.</p> <p>More information: Somerville Climate Forward City of Somerville Carbon Neutrality Pathway Assessment Whitepaper</p>
	Existing Buildings and Energy Conservation	<p>As part of its Somerville Climate Forward plan, the City of Somerville aims to significantly improve energy performance in existing buildings. In pursuit of this goal, in addition to its ongoing initiatives, the City aims to enable a rental energy disclosure requirement through a rental licensing program. Specific actions it seeks to take in these areas include the convening of a stakeholder group for a rental licensing program, identifying an interface for rental energy use disclosure, and coordinating with utilities to automate disclosure. Additionally, they seek to set progressive net-zero building standards for municipal buildings undergoing major renovations.</p> <p>Additionally, in its 2017 Carbon Neutrality Pathway Assessment Whitepaper, the City of Somerville assessed opportunities pertaining to retrofits, including the implementation of point-of-sale energy efficiency improvements, and fuel-switching to electric/ground source heat pumps.</p> <p>Finally, The City of Somerville has a program called SEEN (Somerville Energy Efficiency Now!) that encourages residents to take advantage of state-level incentives through the MassSave program, such as they no-cost Home Energy Assessments. In addition, they provide resources for the Mass Save Small Business Program.</p> <p>More information: Somerville Climate Forward City of Somerville Carbon Neutrality Pathway Assessment Whitepaper Sustainaville-Clean Energy and Energy Efficiency</p>
	Thermal Electrification	<p>As part of its Somerville Climate Forward Plan, the City of Somerville plans to expand its HeatSmart and CoolSmart programs in the city of facilitate building electrification and fuel switching to renewable energy sources. Specific actions it seeks to undertake for expanding HeatSmart and CoolSmart include identification of uptake barriers,</p>

		<p>developing promotional materials, and identification groups of building types for targeted outreach.</p> <p>Additionally, in its 2017 Carbon Neutral Pathway Assessment Whitepaper, the City of Somerville assessed fuel switching opportunities to electric/ground source heat pumps in buildings. The proposed implementation mechanisms included a mandatory heat pump policy, zero-net energy building requirements, and point-of-sale energy efficiency requirements.</p> <p>More information: Somerville Climate Forward City of Somerville Carbon Neutrality Pathway Assessment Whitepaper</p>
	Land Use Policy	<p>As part of its Somerville Climate Forward Plan, the City of Somerville aims to expand its city tree canopy as part of its Stormwater Management strategy. Specific actions it aims to undertake include developing and implementing an urban forestry management plan, as well as community education for stewardship of trees.</p> <p>Additionally, The City of Somerville has a number of ongoing land use initiatives in pursuit of its carbon neutrality goal. This includes the implementation of green infrastructure for carbon sequestration and stormwater management purposes, the expansion of Somerville’s urban forest, as well as a robust education and outreach initiative to encourage urban agriculture and gardening.</p> <p>More information: Somerville Climate Forward Sustainville-Green Space and Natural Environment</p>
Energy Supply	Resilient Supply	<p>As part of its Somerville Climate Forward Plan, the City of Somerville aims to assess the feasibility of carbon-neutral District Energy Systems throughout the city. This results from an opportunity assessed in its 2017 Carbon Neutrality Pathway Assessment Whitepaper as part of its renewables assessment.</p> <p>More information: Somerville Climate Forward City of Somerville Carbon Neutrality Pathway Assessment Whitepaper</p>
	Renewables and Low Carbon Sources	<p>As part of its Somerville Climate Forward plan, the City of Somerville seeks to establish a pathway towards 100% renewable energy in the city. Specific actions it seeks to undertake in pursuit of these goals include extending their existing Community Choice Aggregation Program and researching an appropriate energy mix for the program to increase the share of renewables in electricity provision.</p> <p>Additionally, the City of Somerville ran a Solarize Somerville campaign for residential solar installation in 2017, increasing its capacity by 500</p>

		<p>kW. The City of Somerville is a SolSmart Gold designated city for its work on solar installation and market development.</p> <p>More information: Somerville Climate Forward City of Somerville Carbon Neutrality Pathway Assessment Whitepaper Sustainaville-Clean Energy and Energy Efficiency</p>
Circular Economy/Waste	Waste Reduction	<p>As part of its Somerville Climate Forward Plan, the City of Somerville aims to reduce resource consumption and waste. In pursuit of this goal, the City aims to develop a consumption-based inventory for the city that analyzes life cycle emissions of goods and services in the city, establish goals based on the inventory results, develop an outreach campaign to share these results, and establish recycling ordinance participation goals and an associated tracking program.</p> <p>Additionally, in its Carbon Neutrality Pathway Assessment Whitepaper, the City of Somerville assessed waste reduction strategies. These include potentially applying the mandatory recycling program to large multi-unit buildings, as well as implementing anaerobic digestion for food scraps to create biofuels.</p> <p>Finally, The City of Somerville has policies and ongoing initiatives pertaining to waste reduction, including a plastic bag ordinance banning single-use plastic bag provision, a foam container ordinance banning Polystyrene containers, and a composting program that provides discounted bins for residential use.</p> <p>More information: Somerville Climate Forward City of Somerville Carbon Neutrality Pathway Assessment Whitepaper Sustainaville-Greener Disposal</p>
	Habitat Protection	<p>The City of Somerville has ongoing land use initiatives in pursuit of its carbon neutrality goal that involve habitat protection either as a goal or (more commonly) as a co-benefit. These include the implementation of green infrastructure for carbon sequestration and stormwater management purposes, the expansion of Somerville’s urban forest, as well as a robust education and outreach initiative to encourage urban agriculture and gardening.</p> <p>More information: Sustainaville-Green Space and Natural Environment</p>
Climate Resilience		<p>As part of its Somerville Climate Forward Plan, the City outlines resilience goals across its key action areas. Notable goals in this area include adopting an extreme heat and flood resilience standard for new construction, the investigation of a Stormwater Enterprise Fund to improve stormwater management, the establishment of a</p>

		<p>preparedness education program and emergency alert system for flooding and extreme heat, the increase of public participation in climate preparedness programs, and the promotion of regional collaboration for coastal resilience.</p> <p>Previously, the City of Somerville completed a cross-sectoral climate change vulnerability assessment that assesses sensitivity, exposure, and adaptive capacity based on temperature, precipitation, flooding, and sea level rise projections. It assesses potential impacts to critical infrastructure as well as social vulnerability and impacts to the natural environment (including parks and open space). Finally, it names top priorities for the city and identifies rough options that the city can exercise in addressing its vulnerability in these key areas. Many of these are addressed in the Somerville Climate Forward Plan.</p> <p>More information: Somerville Climate Forward City of Somerville Climate Change Vulnerability Assessment</p>
<p>Inclusion and Outreach</p>	<p>Equitable Programs</p>	<p>The City of Somerville outlines equity considerations for each of its core action areas in the Somerville Climate Forward plan. Additionally, many of the actions it aims to undertake in this document are equity-focused. For example, they aim to continue to offer discounted bikeshare memberships to low-income residents and provide an EV car-share program with incentives for low-income residents.</p> <p>More information: Somerville Climate Forward</p>

Notable Partnerships (if any)

As part of its Somerville Climate Forward Plan, the City of Somerville aims to form a Mystic River Regional Coalition to develop a cohesive flood resilience strategy and advocate for state action. This prospective coalition would include neighboring municipalities, the Mystic River Watershed Association, relevant state agencies, and interested large property owners.

More information:

[Somerville Climate Forward](#)