

SOMERVILLE CLIMATE FORWARD

2019 ANNUAL PROGRESS REPORT

**SOMERVILLE OFFICE OF SUSTAINABILITY AND
ENVIRONMENT**

FEBRUARY 2020



SOMERVILLE CLIMATE FORWARD, one year in review

Just one year after the plan was released, progress is underway in each of Somerville Climate Forward's thirteen priority action areas. Some progress is very visible, like the addition of new bike lanes to streets or the Climate Forward Ambassadors program, and some is harder to see, like policy research on rental energy disclosure programs or the purchasing of 16% of electricity used for municipal operations from renewable sources. City staff have been working hard to make progress on Somerville's climate goals and community members have stepped up to do their part too. Making the Climate Forward plan a reality will continue to be a community-wide effort.

This report summarizes progress to date on the priority actions in the plan. For more details on each of the actions, please refer to the plan at www.somervillema.gov/climateforward.



Progress Highlights

- Over \$500,000 of the Fiscal Year 2020 budget was dedicated to implementing Climate Forward priorities.
- The Office of Sustainability and Environment added a **new Energy Manager position**, growing the office to 4 full-time staff.
- Engineering developed a **detailed stormwater model** of the city and used it to understand what parts of the city are likely to flood during storms today and with the changing climate in the future.
- The **2020 Somerville Community Choice Electricity program** **doubles the additional amount of renewable electricity** in the standard option from 5% to 10% above the state requirement.
- **Somerville's first bi-directional bus lane** was installed on Broadway and over 4 miles of bike facilities were installed throughout the city.

Somerville Climate Forward is a comprehensive climate action plan that sets an agenda of priority actions to advance the following vision for Somerville:

- **Equitable** - The benefits and opportunities created by climate action will be fairly distributed to all, and resource allocation is prioritized to alleviate the unequal burdens of climate change in the community.
- **Carbon Neutral** - Somerville will be a net-zero emitter of greenhouse gases, and any emission sources that cannot be fully eliminated will be reduced through carbon offset programs.
- **Resilient** - Somerville will adapt in order to prepare for the chronic and acute impacts of climate change.
- **Thriving** - Somerville will continue to be an exceptional place to live, work, play, and raise a family.



BUILDINGS

Net-zero and resilient new buildings

- A **new zoning ordinance** with numerous green building requirements and incentives was adopted in December.
- Mayor Curtatone and city staff **advocated for an update to the state stretch energy code**, which sets energy standards for new construction and major renovations in Massachusetts cities and towns that have opted into the state's Green Communities program.
- City staff voted on the 2021 International Energy Conservation Code, the national standard energy code, which Massachusetts is required to adopt as the base energy code. Voting for higher energy efficiency standards at the national level will bring efficiency gains to Massachusetts and other states.

Improved energy performance in existing buildings

- Somerville was awarded a competitive grant to convene a **peer learning exchange on rental licensing, energy standards, and energy disclosure policies** with several other American cities.
- Housing staff convened an interdepartmental **Rental Building and Energy Efficiency Standards Working Group**. The first meeting was held in September 2019.
- The Housing Division also prepared to launch a pilot program in 2020 to provide energy efficiency and air source heat pump advisory services.



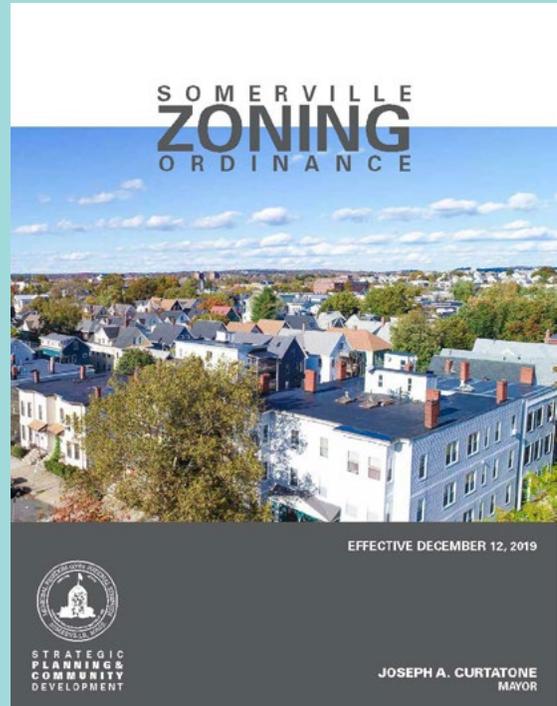
PRIORITY ACTIONS

- Explore the feasibility of local net-zero energy or net-zero emissions-based performance standard.
- Adopt flood and extreme heat resilience standards for new construction.
- Enable a rental energy disclosure requirement through the creation of a rental licensing program.
- Continue and expand thermal electrification programs.

Spotlight on Zoning

A new zoning overhaul was passed by the City Council on December 12, 2019, ushering in a number of new requirements for development in Somerville to better align with the city's sustainability and climate goals. Some of the most notable changes that will reduce energy usage and greenhouse gas emissions in new buildings are:

- Requirements for buildings over 25,000 square feet to be LEED Gold certifiable and for buildings over 50,000 square feet to be LEED Platinum certifiable. LEED is the most widely used green building rating system and Platinum is the highest level achievable in LEED.
- Developers will be allowed to increase the unit count of their buildings if they meet Net Zero Ready requirements, which include a high performing building envelope and no fossil fuel combustion for heating or cooking. This is an incentive for developers to build Net Zero Ready buildings because additional density can bring in additional revenue.
- The new zoning sets ambitious green building standards in redevelopment areas. Development in Master Planned Overlay Districts--primarily in the Union Square, Boynton Yards, and North Point areas--must meet even higher sustainable building standards. This overlay district allows for larger development projects in exchange for designing buildings to meet stringent energy efficiency standards, using no fossil fuels for heating or cooking, installing a green roof and/or solar on their roof, and meeting additional standards for civic space design.



The zoning ordinance also adds several other requirements that advance sustainability, reduce greenhouse gas emissions, and improve climate resilience. Some of the most important measures include:

- Defining parking maximums in all areas within walking distance to transit and establishes robust minimum bicycle parking requirements.
- Requiring the majority of new development to provide 20% of new dwelling units as affordable.
- Requiring higher density buildings and larger businesses to submit Mobility Management Plans and implement transportation demand management programs & services.
- Establishing New England's first environmental sustainability performance standard for urban landscapes: the Somerville Green Score
- Requiring new development to widen sidewalks and prohibits curb cuts on designated 'pedestrian streets.'



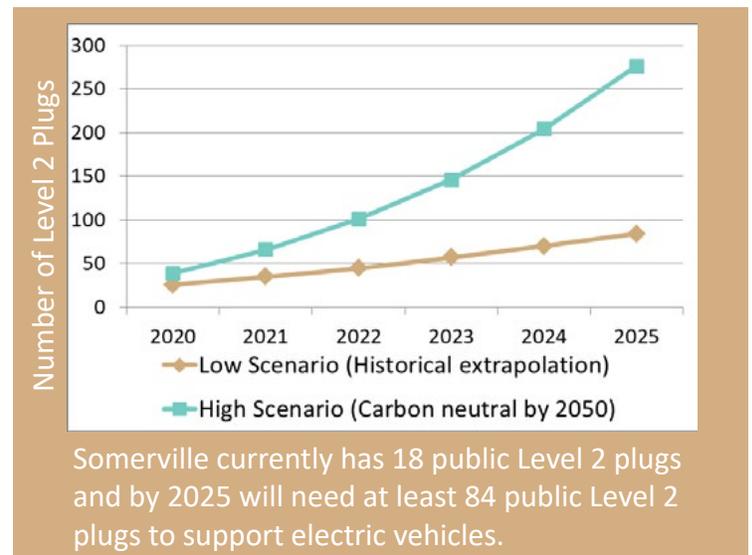
MOBILITY

Equitable low-carbon mobility

- Somerville’s **first bi-directional dedicated bus lane was installed** on Central Broadway along with bike lanes and new crosswalks. Signal timing was also changed to prioritize bus movement and keep traffic flowing. Because of this the MBTA added 10 daily bus trips to the weekday schedule, 26 trips to the Saturday schedule, and 24 trips to the Sunday schedule for Route 89.
- Somerville added **five new stations to the Blue Bikes bike share system**, bringing the total to 28 stations citywide.
- **Protected bike lanes were installed on Washington St. and Beacon St.** and parking on Park St. was repurposed to make space for a new bike lane, creating an important connection to the cycle track on Beacon St.
- A Request for Proposals was released to hire a consultant to complete a **parking and curbside inventory**, which will provide important data on existing parking conditions to inform updates to Somerville’s parking policies and plans.
- A multi-stakeholder **Parking Study Taskforce was convened** to advise on parking policies.

Rapid transition to electric vehicles

- OSE researched best practices in urban public electric vehicle (EV) charging programs and **forecasted future demand for public charging stations**.
- OSE received seven responses to a Request for Information from EV charging providers. The companies shared information about their approach to partnering with cities and expanding public charging.
- Somerville was awarded a grant to work with four other American cities to identify opportunities to expand EV charging access to renters.



4.4 miles of bike facilities were added to Somerville streets in 2019.



PRIORITY ACTIONS

- Improve bus reliability and trip times.
- Improve and expand bicycle infrastructure.
- Assess parking policy and parking supply to meet low-carbon mobility needs.
- Develop electric vehicle charging infrastructure strategy.



ENVIRONMENT

Stormwater management

- Engineering **completed detailed citywide stormwater modeling and analysis**, including an analysis of the impact of green stormwater infrastructure. The project was funded by a competitive state Municipal Vulnerability Preparedness Action Grant.
- Engineering drafted a stormwater runoff policy for driveways.
- Staff conducted stakeholder interviews to understand barriers and opportunities to a developing a stormwater enterprise fund.

- The City Council approved a \$120,000 Program Improvement Request for parks and tree maintenance.
- The newly formed **Urban Forestry Committee began meeting** and working on assisting with education and outreach about caring for urban trees.
- The City Council passed a **Tree Preservation Ordinance** that sets new requirements for tree removal on private property.

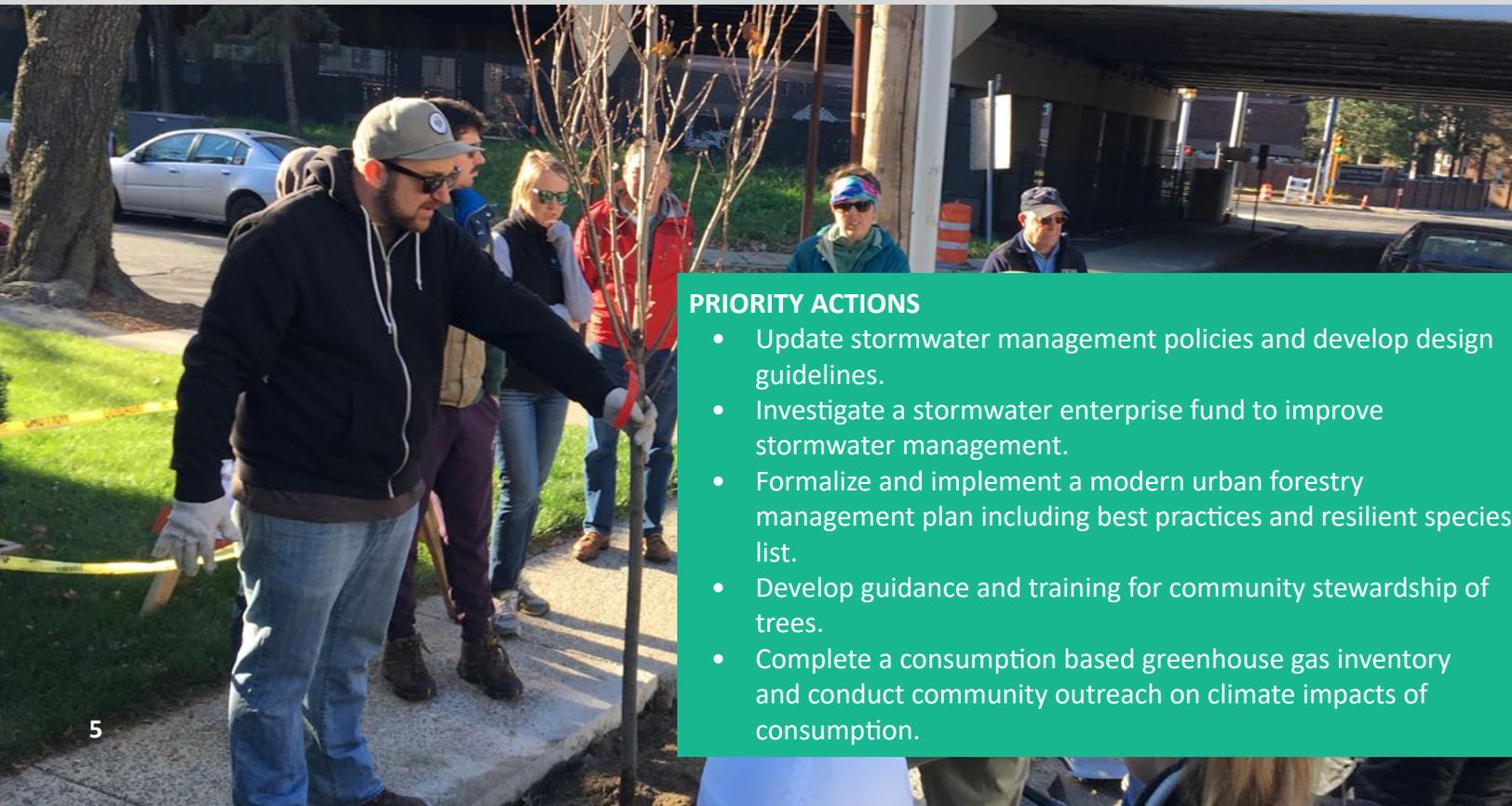
Expanded urban tree canopy

- The **public tree inventory** was completed in January 2019. The inventory will allow the City to better track the health and size of the public urban forest over time.
- A full draft of the Urban Forestry Management Plan was completed and will be finalized in early 2020.

Reduced consumption and waste

- OSE’s summer intern researched potential methodologies for completing a consumption based greenhouse gas inventory.
- OSE partnered with the Arts Council to bring creative engagement on sustainable consumption to ArtBeat with this year’s theme: “CONSUMED”.

417 trees were planted on public property in 2019.



PRIORITY ACTIONS

- Update stormwater management policies and develop design guidelines.
- Investigate a stormwater enterprise fund to improve stormwater management.
- Formalize and implement a modern urban forestry management plan including best practices and resilient species list.
- Develop guidance and training for community stewardship of trees.
- Complete a consumption based greenhouse gas inventory and conduct community outreach on climate impacts of consumption.



COMMUNITY

Healthy and resilient community

- New **infographics with flood safety messages** were developed and shared as part of Climate Preparedness Week. The infographics and additional information on flood preparedness will be shared on a new public webpage that will be released in 2020.

Pathway to 100% renewable electricity

- The second term of the Somerville Community Choice Electricity (CCE) program began on January 1, 2020. The **new program increases amount of additional renewable electricity for the default option from 5% to 10%**, bringing the total renewable electricity for those accounts to 26% for 2020.

Culture of climate action

- **Sixteen Somerville residents completed the first ever Climate Forward Ambassadors Program.**
- Ambassadors completed and presented projects about safe family biking, political activism, low-carbon cooking, household climate action planning, and more.



Over **400** households opted up to 100% renewable electricity through the CCE program.



PRIORITY ACTIONS

- Establish a preparedness education program and an emergency alert system that help protect the community from flooding and extreme heat events.
- Extend the community choice electricity aggregation program and increase share of renewable energy.
- Organize community climate action and preparedness leadership program to educate the public and increase participation in climate programs.



LEADERSHIP

City government leading by example

- OSE **added a new Energy Manager position** in the FY20 budget. The Energy Manager is responsible for reducing energy usage and greenhouse gas emissions in municipal buildings.
- The City Council approved a mid-year budget request from the Administration to procure 16% of Somerville's municipal electricity from local renewable sources. With the renewable electricity required by the state's Renewable Portfolio Standard, **Somerville is now getting 32% of the electricity used for municipal operations from local renewable sources.**

State advocacy for carbon neutrality

- Mayor Curtatone signed a joint letter with the mayors of Boston and Cambridge to the Massachusetts Board of Building Regulations and Standards (BBRS) asking for the development of a net-zero stretch code.
- OSE and Engineering worked with Mothers Out Front to engage gas utilities on addressing leaks.

Regional collaboration for coastal resilience

- The Mystic River Watershed Association convened the **Resilient Mystic Collaborative (RMC)**, which brings together communities to work on local solutions to increase climate resilience within the Mystic River watershed. The Collaborative has grown to include 17 of 21 watershed communities.
- The RMC successfully advocated the Massachusetts Department of Conservation and Recreation to prioritize improvements for Amelia Earhart Dam to reduce flood risk along the Mystic River.

PRIORITY ACTIONS

- Set progressive net-zero building standards for new municipal buildings and those undergoing major renovation; set renewable electricity standard for all existing and new municipal buildings.
- Advocate for building and energy codes that achieve net-zero energy performance.
- Advocate for faster decarbonization of electricity.
- Advocate for more stringent regulation of utility gas leaks.
- Create a Mystic River regional coalition of neighboring municipalities to develop a cohesive regional strategy and to push state action.
- Assess potential intervention options to address flood risk along Mystic River.



Members of Mothers Out Front present Mayor Curtatone with hundreds of postcards from Somerville residents pledging support for renewable electricity procurement through the Somerville Community Choice Electricity Program.

WHAT'S NEXT FOR 2020?

- **Stakeholder Engagement** – Input from community members, regional partners, subject matter experts, and municipal staff will be critical to move many priority actions forward. Project leads will be reaching out to a variety of internal and external stakeholders to inform policy and program designs in 2020.
- **Studies and Plans** – Additional data and analysis is required for some actions. Notable priorities for 2020 will be to complete a study of Somerville's parking assets and to complete the 2018 Greenhouse Gas Inventories, including a first ever consumption-based inventory. The Urban Forestry Management Plan is also slated to be published in early 2020 with bicycle network and Vision Zero plans not far behind.
- **Pilot Programs** – Many of the Climate Forward priorities require implementing something new. Pilots are great ways to test out new ideas before committing to long-term programs. In 2020 the Housing Division will launch an energy efficiency and heat pump advisory pilot program for Somerville property owners. OSE also has plans to move forward with a residential curbside electric vehicle charging pilot.
- **Communication and Community Engagement** – OSE will continue the Climate Forward Ambassador program into 2020, training a new cohort of Somerville residents to be leaders on climate action in their community. A new Flood Ready website will also be launched with the intention of sharing more information about flood risks and ways to prepare and respond to nuisance and extreme flooding events.
- **Advocacy** – The City of Somerville will step up efforts to advocate for progressive and equitable climate action at the regional, state, and national levels. One of the top priorities for 2020 is advancing development of a net-zero stretch energy code.





THANK YOU to everyone who has worked on implementing Somerville Climate Forward this past year.



SOMERVILLE OFFICE OF SUSTAINABILITY AND ENVIRONMENT, FEBRUARY 2020

