MIT Alumni EESN: Cities Building Climate Solutions and Resiliency

City of Somerville, MA
Oliver Sellers-Garcia, Director, Office of Sustainability & Environment
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Presentation outline

- Background on Somerville and Office of Sustainability & Environment
- Highlights from climate change analysis
- Climate action planning in Somerville
- Reflections on Somerville and municipal-level climate action

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Somerville, MA

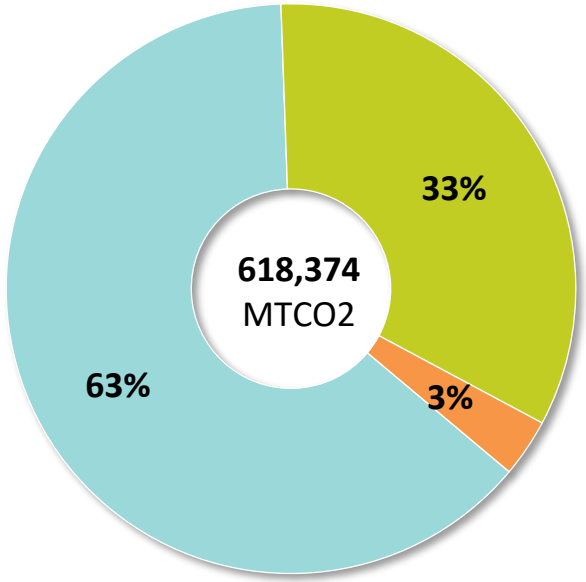
- 80,000+ residents
- 65% renters
- <4 sq miles land
- Densest city in New England
- Red, Orange, and Green Line
- 2014: carbon neutral by 2050

Office of Sustainability & Environment:

- Policy, planning, programs & internal support
- City and community scope

Credit: Jonas Kahn

2016 Somerville community greenhouse gas emissions



Stationary Energy Transportation Waste

Absorbing GHG Emissions

A forest 185 times larger than the City of Somerville would be required to sequester the total community emissions for one year!

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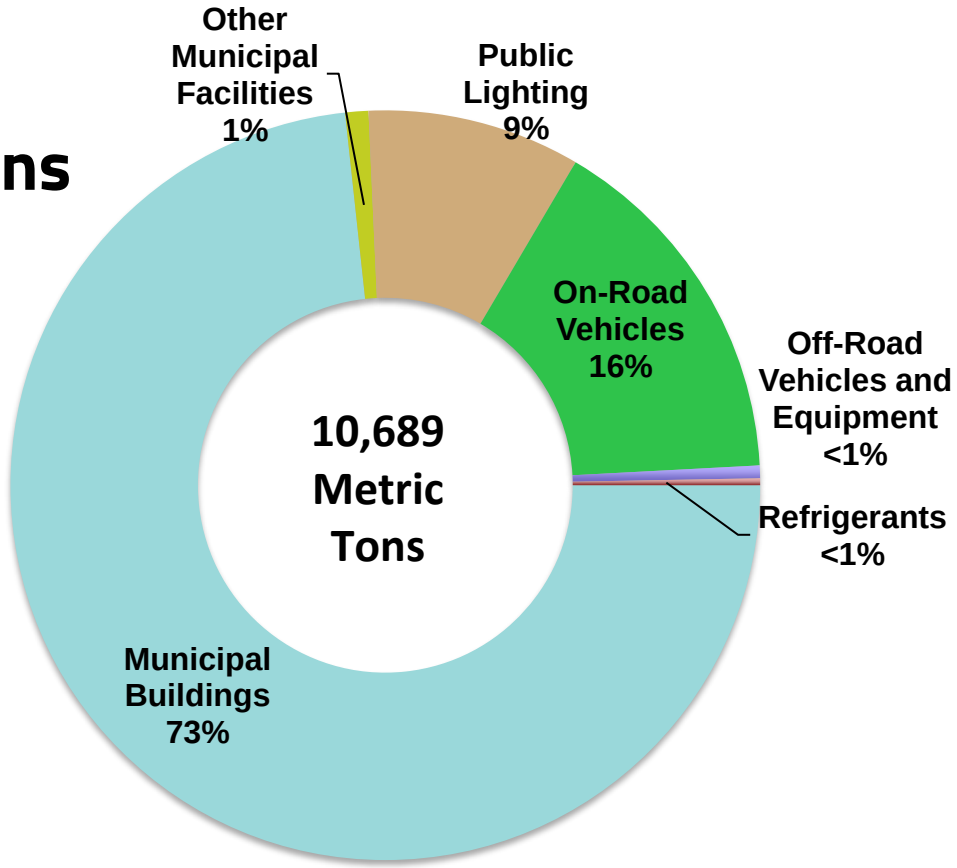
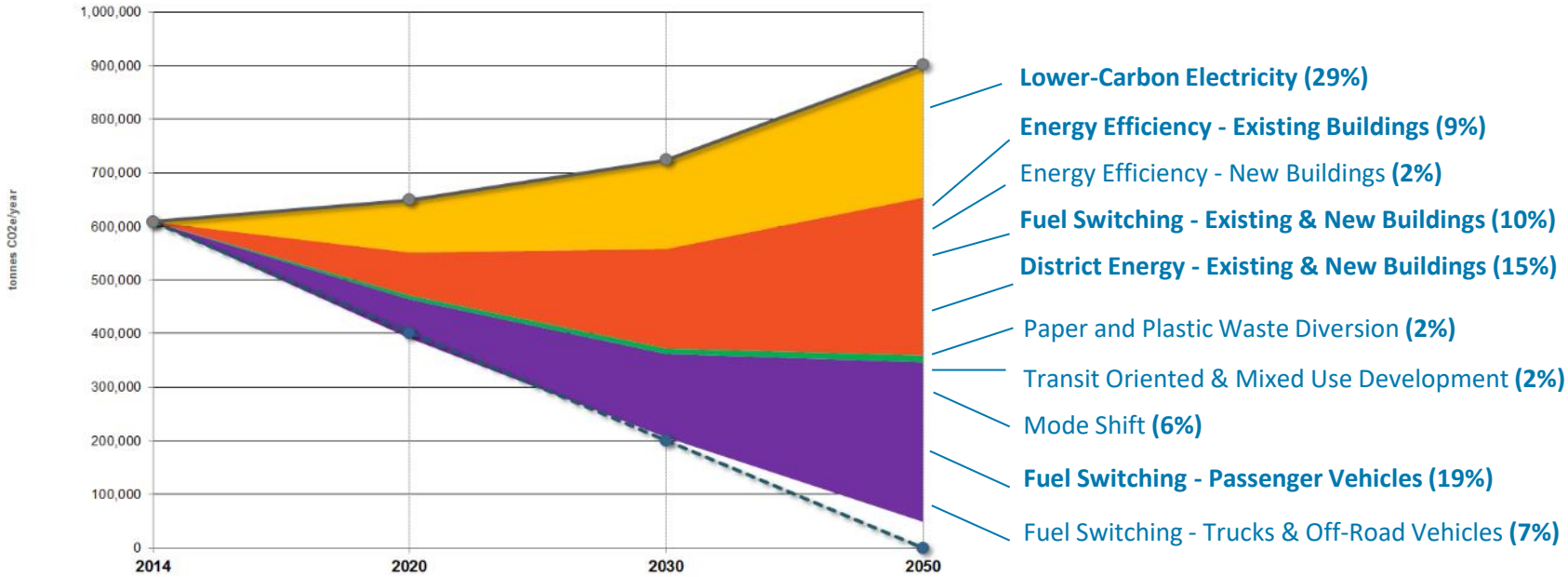
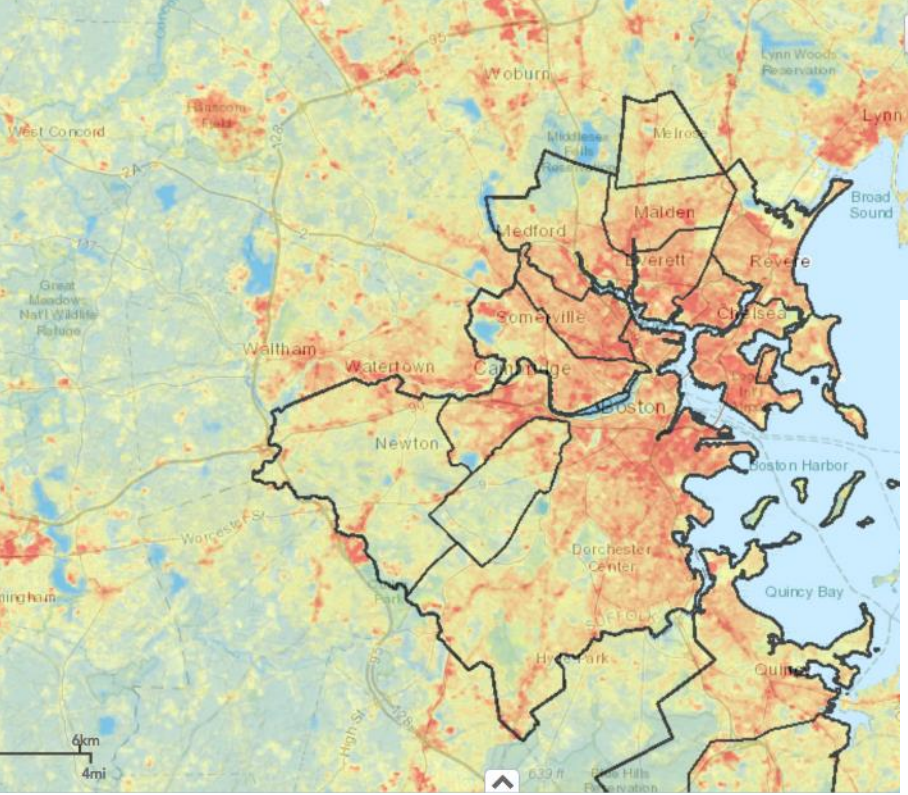
2016 Local government operations emissions

- LGO emissions are < 2% of Somerville's total community-wide GHG emissions

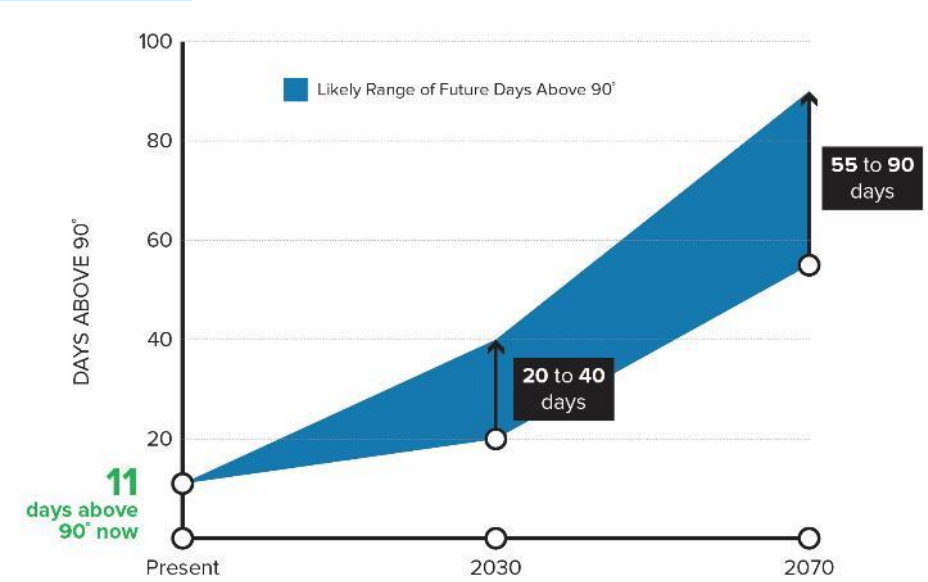




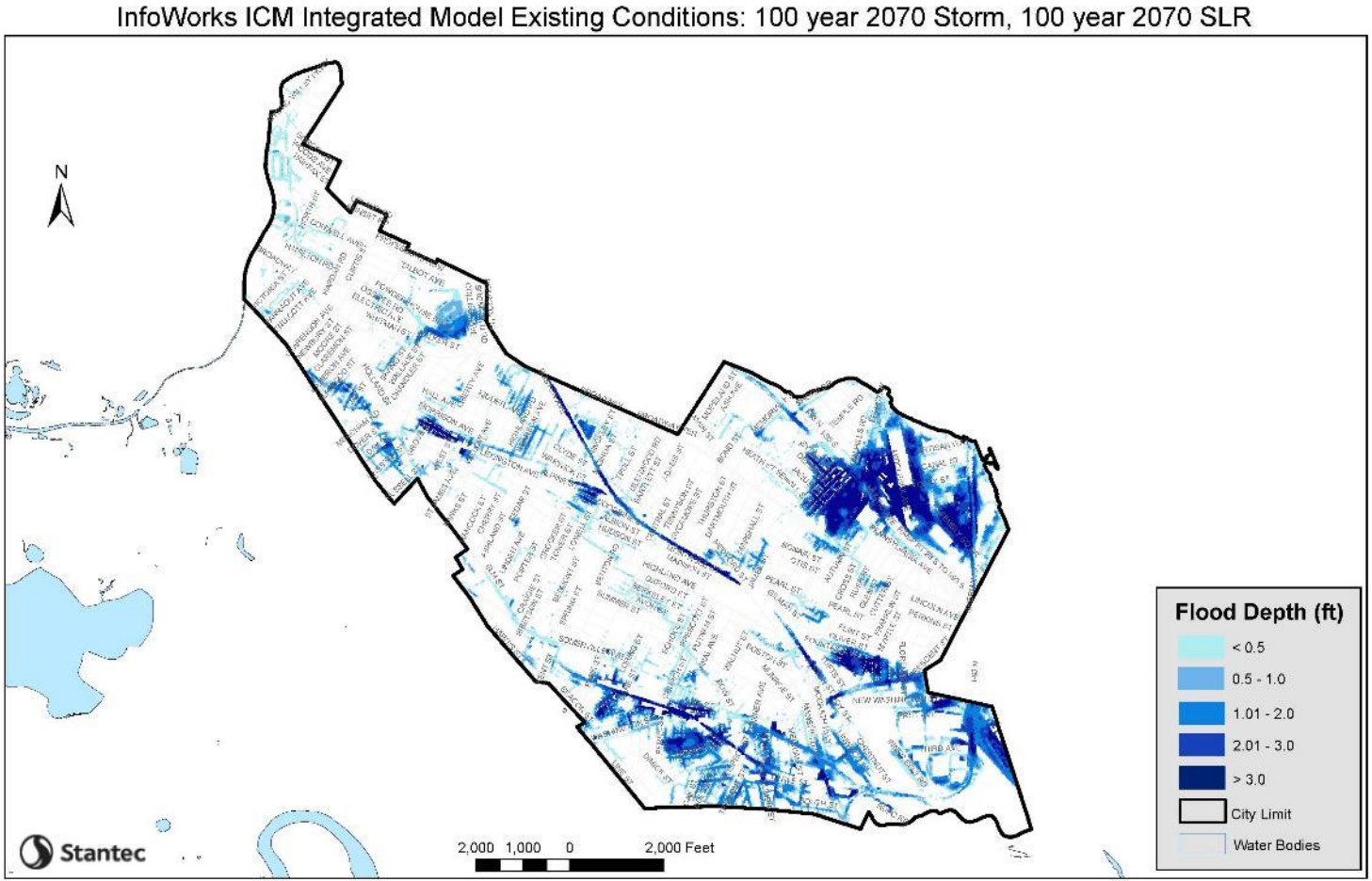
Carbon neutrality pathway core strategies



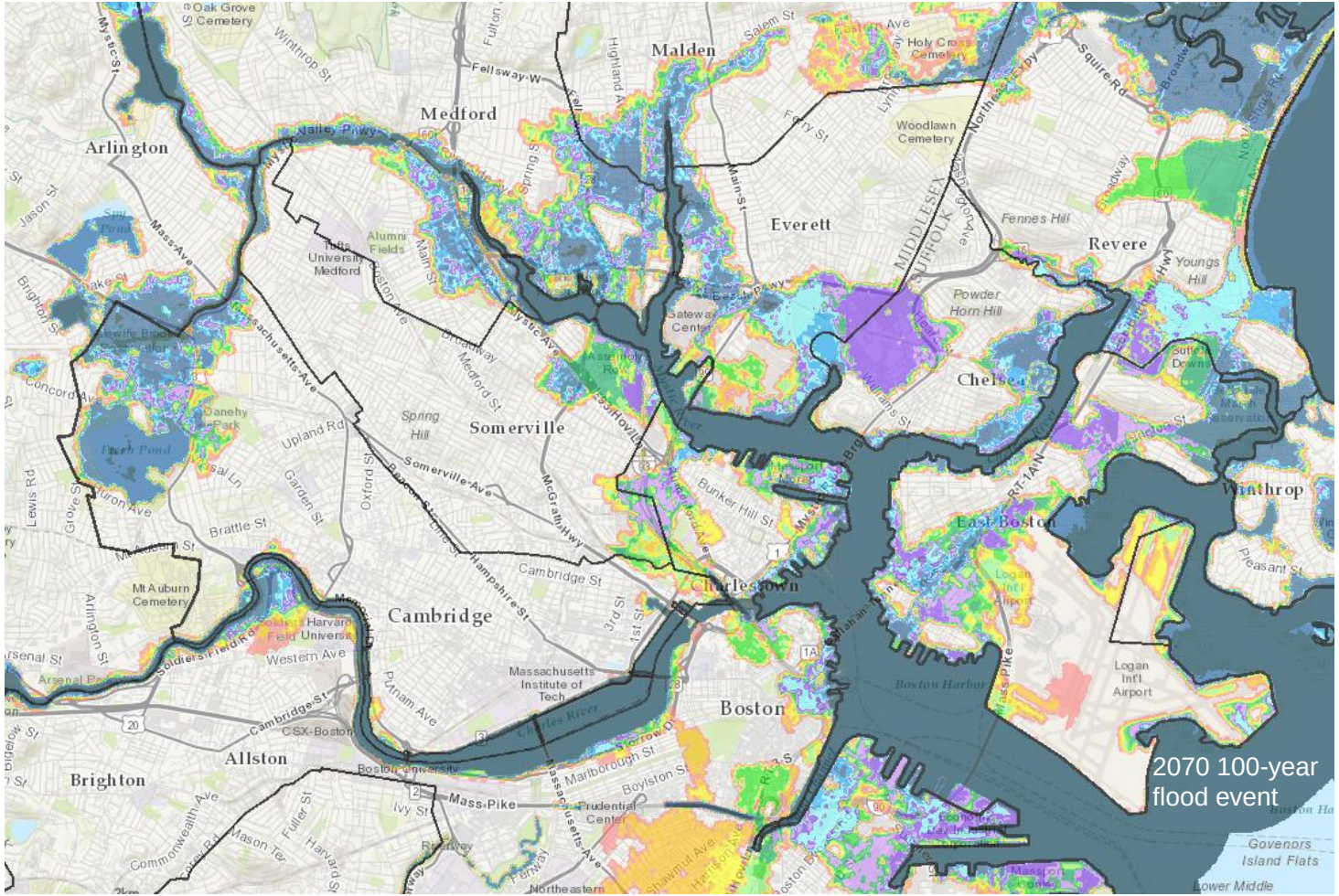
Average Daytime Land Surface Temperature (Landsat), Trust for Public Land



Extreme heat is an existing risk to public health. Climate change is increasing the chance of high heat days and heat waves.



Flood risk from precipitation: 100-year storm in 2070 (1% annual chance of occurring)



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Coastal flooding in the region will impact Somerville beyond what happens in our borders

Somerville Climate Forward

- 13 actions for GHG reductions, resilience, and equity
- Released in November 2018
- Focused on first steps
- Five-year horizon
- Based on technical analysis; developed with community and experts

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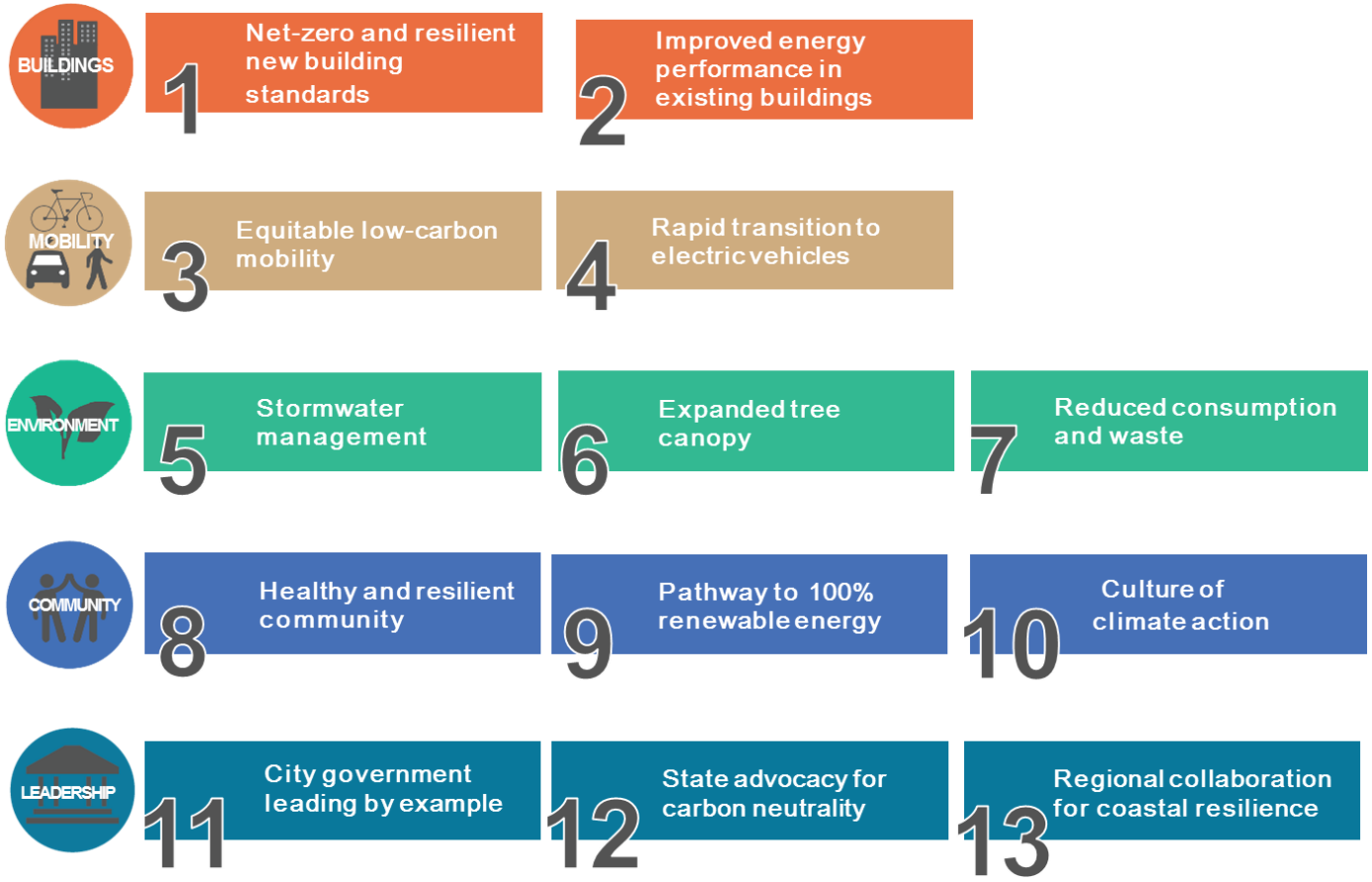

Somerville Climate Forward: Plan at a Glance

Climate Forward progress highlights

- **Low-carbon zoning for new buildings**
- Rental housing energy disclosure
- **MA-wide net-zero stretch code**
- Urban forestry management plan
- Flood preparedness education
- Stormwater system modeling
- 75+ Climate Ambassadors trained
- Stormwater management rules
- **Regional infrastructure and social vulnerability assessment**
- Keep Cool Somerville community program
- City 25% energy use reduction since 2104 & new energy fund

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Reflections on Somerville and municipal climate action

- Impactful action starts with seemingly unrelated changes.
- Disconnect between popular and impactful action
- Centering equity is most effective but not easy
- Reaching limits of municipal authority
- Need new metrics for action at municipal level
- Green gentrification
- Policy for urban areas differs from national policy (or suburban or rural)
- Cities are leaders, but not alone anymore

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Thank you

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Any questions?

Oliver Sellers-Garcia
Director
OSE@somervillema.gov

www.somervillema.gov/sustainaville