Somerville Climate Forward

Utilities & Infrastructure Working Group Meeting #2

November 30, 2017

Attendance

- Jess Fosbrook, City of Somerville
- Michelle Melton, Commission on Energy Use and Climate Change
- Seth Berkman
- Sean Donaghy
- Isabel Kaubisch
- Hannah Payne, City of Somerville

Solutions the group is most interested in seeing implemented:

- Design stormwater detention structures
- Sewer separation with green infrastructure
- Establish drainage criteria
- Depaving
- Smart grid technology & microgrids
- Advocate for resilient utility service
- Elevate substations

Individual Feedback

- Jess : Managing Union Square Infrastructure Improvement project. 60% of sewer flows through Union Square. Project will provide needed increase in system capacity. Project incorporates separation of sewer and stormwater pipes, connections to the GLX drainage pipe, box culvert, pump station, green infrastructure, and streetscape improvements including wider bike lanes. Board of Aldermen to vote on funding. Somerville Ave – utilizing all space available for green infrastructure.

- Sean: National Grid is piloting microgrid/ smart grid technology. Smart Grid communication technology allows for up to the minute information from the meter. NGRID is notified automatically when power is lost. Grid switches on tops of poles – partition off certain sections of the grid – can get power back on sooner during outages. Provides resiliency benefits of partitioning from grid at times but being able to connect to grid during normal operation. Challenge: Eversource has a huge territory and there is competition for where upgrades and

smart technology gets implemented. Is there a way to get smart grid technology sooner? Would a municipally owned utility be able to implement these changes faster?

- Seth: Energy utilities - Analyze sectionalizing and redundancies– we should be wary of policies that encourage investor owned utilities to build more infrastructure. Could pass on costs to rate payers and increase investors' profits. Redundancies need to be carefully analyzed. Are substations the most vulnerable part of the grid during storms and flooding?

  Stormwater Infrastructure – When designing stormwater detention facilities in parks, can disruption to neighbors be made up for? Lincoln Park had preexisting drainage issue – people adjacent are getting benefit despite construction. Nunziato project area isn't currently experiencing flooding and project provides relief for area at large. Are there opportunities to expand green space to neighbors?

- Michelle: Depaving is a promising solution because people will see immediate benefits. Depaving and reducing impervious covers is not as expensive. Street flooding during storms/microbursts is really bad. Would be helpful to know to what extent depaving makes a difference. How much paved area is owned by the city and how much is owned by private owners?

- Jess: Somerville is an old city with old infrastructure that can't handle the density we have today. Interested in setting drainage criteria with climate change projections in mind. When designing new projects we have drainage criteria that the city likes to design to but we currently don't meet criteria in many areas because starting from poor baseline. It would be great to be designing for future precipitation levels. Internally it would be helpful to have criteria to measure against and to use for project planning. Does having criteria and a plan for what needs to be done to meet that criteria matter to the public? Does having data and a plan help us advocate for project support and/or funding? There is a long way to go to meet today's basic standards and it will require more work for stormwater system to adequately handle future precipitation. But it would be great to set the goal to be designing to climate change projections.

- Isabel: Green Infrastructure - Streets should be redesigned to prioritize walking and biking and should have green infrastructure retention basins. Couple green infrastructure with flood proofing buildings. See cloudburst plan for Copenhagen – all water stored –mostly by replacing pavement with blue/green infrastructure. Pilot projects of green infrastructure have the benefit of engaging residents and increasing awareness and education. Need to teach residents about what they can do to reduce the flow of stormwater off their property.

Group Discussion

- Need more outreach on climate risks. People don't understand the problem – don't know what the challenges are with climate change. Need to give people solutions but also need to be clear about the challenges that the city faces and how it could impact residents.

- o Can climate change vulnerabilities and resources go into the Welcome to Somerville information page/packet?
- o Should be utilizing existing ways that people engage with the city (Weekly update emails, ResiStat Meetings, City Alerts—email and phone).
- o Climate risk should be part of disclosure point of sale/ point of lease. Sticker idea to label at risk homes was brought up at the last meeting. Would that idea work?
- o Webviewer of climate risks & flood prone areas.
- Stormwater utility
  - o Way to create a pot of money for a city to use to address stormwater management. How you set it up is critical to how you get it accepted. Could be used for stormwater upgrades. Common pushback is that it is seen as another tax. Other municipalities are looking at whether a stormwater utility makes sense. Would likely need feasibility study to look at how much effort and budget is already spent on managing stormwater infrastructure.
  - o How would this work with so many renters?
  - o Somerville charges less for sewage output than other communities. Quincy is an example to look at for charging more for sewer services than water.
  - o Is there a way to restructure fees to encourage reducing sewer output without making bills higher total?
  - o Can we incentivize property owners to store water on site without a stormwater utility?
  - o Newton has a flat fee on a bill – all goes to upgrading stormwater system.
- How does green infrastructure get considered in value engineering of capital projects? The City should be leading by example with its projects.
- Engineering Drainage Criteria – Internally City has plans for drainage criteria. What would be helpful for the public to see about the plan and where that puts us in terms of climate change?
  - o Show people drainage criteria we are meeting today, here is what we want to meet with climate change, this is what it is going to take.
  - o A report that addresses those questions would be helpful.
  - o Make case for what needs to be done on private property and what needs to be done through larger infrastructure projects.
- Jess- Appreciate the need to do things on private property – but residential and private property projects don't get us as far as large infrastructure projects. Nunziato is absolutely critical and is facing a lot of resistance – would laying out where those projects put us and what projects need to happen next while putting it in the context of climate change be helpful?
  - o Group -Doesn't matter how you talk about it. People will be annoyed. Plan the best project you can plan and make the best case you can. Renters don't care because they likely won't be there to see the benefits at the end of the project.
  - o Property owners should be incentivized to do things on their property even if they are a drop in the bucket. Some would probably make improvements voluntarily, but financial incentives are what people respond to.

- Should have more citizen input in stormwater issues. City could set up a stormwater commission to give residents a way to engage with the system and then also have commissioners be ambassadors for projects. Would be valuable with long-term buy-in for projects
- Municipal electric utility—likely overly complicated and doesn't necessarily lead to outcomes we're looking for. Should advocate for performance based regulation instead or take a regional approach if we're serious about looking at taking control of utility. Tier 3 idea to be considered later.