

City of Keene
New Hampshire

ENERGY AND CLIMATE COMMITTEE
MEETING MINUTES

Wednesday, September 4, 2024

8:00 AM

**2nd Floor Conference Room,
City Hall**

Members Present:

Zach Luse, Chair
Councilor Bryan Lake
Jude Nuru
Diana Duffy
Clair Oursler
Gordon Lerversee
Jake Pipp, Alternate
Charles Redfern, Alternate
Rowland Russell, Alternate
Michael Winograd, Alternate

Staff Present:

Mari Brunner, Senior Planner
Megan Fortson, Planner

Members Not Present:

Paul Roth, Vice Chair
Lisa Maxfield
Kenneth Swymer
Annu Joshi Bargale

1) Call to Order and Roll Call

Chair Luse called the meeting to order at 8:06 AM and invited all attending alternates to participate as regular members.

2) Approval of Minutes

Councilor Bryan Lake moved to approve the prior meeting minutes with a second from Mr. Jake Pipp. Ms. Diana Duffy noted that line 25 references “money.” She asked for clarification, and Mr. Nuru responded that it should read “mandate.” With everyone in agreement, the word “money” would be changed to “mandate” on line 25. With no further changes or corrections, the August 7, 2024, minutes were approved unanimously.

3) City of Keene Flood Mitigation Efforts - Don Lussier, Public Works Department Director, will provide an overview of the City’s efforts to mitigate flood risk and prepare for future flood events.

Chair Luse introduced Mr. Don Lussier, the Public Works Department Director. Mr. Lussier explained that he would be speaking about what the City and Public Works Department have been doing regarding flood management. He handed out an excerpt from the Capital Improvement Plan and explained that the flood management plan is a “six-legged stool.” He noted that while that is a terrible analogy, it does have six prongs. The first one, the Beaver Brook Flood Mitigation Project, is a project the City undertook with the US Army Corps of Engineers before Mr. Lussier started with the City. He explained that an earmark was put into the congressional budget to have the Army Corps study Beaver Brook and develop mitigation measures. He stated that very little work has been done and explained that while the Army Corps does a great job, they set their priorities, and this project has not risen to the top of them.

Mr. Lussier explained that he met with the Army Corps in 2016, and at that time, they did preliminary work to identify the feasibility of the projects. Through that feasibility analysis, they learned that the value of the damages suffered from Beaver Brook does not warrant any potential solutions' cost. They have moved from the Sanction 205 program into a Planning Assistance for States program. The latter program provides further opportunities to work with the Army Corps to investigate potential solutions, but does not offer money for construction at the tail end as the former program did. The intention is that, eventually, this will lead to a mitigation project where they will build infrastructure that will prevent flooding. The Army Corps will not be doing the construction; they will provide the City with a report of potential options, including estimated costs and possible benefits.

Mr. Winograd asked Mr. Lussier if he had met with the Army Corps since 2016. Mr. Lussier responded that they had met five or six times since then, each time with a group of different engineers. He joked that he could give the tour in his sleep now. Mr. Winograd followed up, asking if Mr. Lussier had considered hiring a consultant. Mr. Lussier explained that they have a certain amount of money available, and at some point, they will have to decide whether to thank the Army Corps for their contributions and move on to a private consultant. Mr. Winograd suggested it may be time to thank them and move on.

Mr. Lussier explained that a significant portion of this project is stormwater mitigation. For 2025, 2026, and 2027, approximately 4.5 million dollars are programmed for improvements in the downtown area from Central Square to Church Street, Lamsen Street, and Gilbo Ave and as far as St. James Street. On the periphery of the downtown footprint, roads like Railroad Street, Roxbury Street, and Water Street have already upgraded their infrastructure to accept the water from the downtown area once the downtown infrastructure is upgraded and installed. The work to upgrade the downtown will be over the next few years.

He explained that next year, Key Road will have a substantial project. Most people do not realize that a large diameter pipe runs from the back of the cinema through the plaza's parking lot to Midas. The City has been chasing sinkholes in that area for three or four years. The 72-inch x 54-inch elliptical pipe has failed, with only the top of the pipe remaining. The City does not have the

equipment for the repair, so they are advertising for a consultant to do the construction plans for that. Design will likely be done over the winter, with construction taking place next year.

Mr. Lussier said that Church Street is a project that is near and dear to him. He explained that the project will be phase two of the Eastside Improvements. Phase one was the Carpenter Street Improvements, which was completed a couple of years ago. Phase two will eventually move the footprint up to include Church, Edwards, and Gurnsey Streets. Pako Ave will also receive some improvements in the coming years.

Mr. Lussier shared that in 2015, they completed work on Sullivan and Rule Streets. In 2016, they worked on the town brook under City Hall. When the garage was built, the brook was routed through it, but nothing was ever done about the pipe running through City Hall. There have been continuous issues with that pipe, including cracking in the back of City Hall, which requires it to be addressed. It will eventually be filled with expanding foam.

Roxbury Street was an important project to mitigate the flooding on Vernon and Elm Streets. A four-foot-diameter pipe running through the parking garage enters a historic 36-inch-diameter brick pipe. That pipe was upgraded to a five-foot-diameter pipe that can take water from the town brook line and come through from Central Square.

In 2018, Winchester Street, Madison Street, and Ralston Street were all improved to address flooding on Davis Street and Wilson Street. In 2024, an Island Street project was funded. There was a bid on the project, but the contractor said it would take them two years to complete. The City did not want to put the neighborhood through that, so they plan to put it out for bid again in the Spring.

Mr. Lussier said the next prong of this is the channel maintenance program. It is brand new funding for 2025. The intention is that over the coming years, they will address some of the open drainage channels. The City maintains several of them, but some require maintenance beyond what the City has the equipment or capacity to do, so that work will be coming up.

The stormwater spot repair program is relatively new. They have found that as they are being more aggressive in the catch basin cleaning, they are identifying projects that must be addressed. These are not major intensive projects, but fall outside the City's equipment availability or capacity.

Stormwater system analysis provides some funds to hire a consultant to perform a preliminary analysis of suggested repairs/replacements, equipment needs, and estimated costs. Mr. Lussier stated, "These types of analyses allow the City to true up the costs before getting into the meat and potatoes of the budget."

Mr. Lussier explained that the last one is very new and specific to metal pipes. It is the stormwater mainlining. The analysis has shown that while some pipes do not need a total upgrade, they are

approaching the end of their useful life. If they can catch the pipe before it starts to fail, they can install liners like sewer pipes, which allows the City to upgrade and replace the pipe at a fraction of the cost compared to an open-cut replacement.

The last thing he wanted to mention is the bridge program. He explained that they replace the red list of bridges with funding available through the state. As the bridges are being replaced, most are getting a more significant hydraulic opening to comply with state rules and current state design standards for bridge openings. This is helping eliminate bottlenecks, specifically in Beaver Brook. They have also done Roxbury, and hopefully, next year, if the permitting is done in time, they will do George Street. This will take the current 18-foot opening to a 22-foot opening, adding more capacity to the bridge opening.

Chair Luse asked if the roofs of downtown buildings drain into the stormwater drains. Mr. Lussier said many of the roofs in downtown are connected and drain into sanitary sewers, which is not allowed, but those buildings predate those rules. As part of this project, the City will extend a stormwater stub to the building to provide the infrastructure to building owners and educate them that replumbing to the stub means the owners will then be in compliance with the federal Clean Water Act.

Chair Luse asked if Mr. Lussier and his team had looked at vegetation or green roofs. Mr. Lussier shared that the project will include some green infrastructure. It will not involve green roofs because they are considered private property. The only one the City has access to is City Hall, and City Hall is not designed to accommodate a green roof. The green infrastructure included in the project will mostly be in the form of tree wells.

Dr. Russell asked if there was anything in the works for neighborhoods, such as tree wells, drains, etc. Mr. Lussier shared that as streets get reworked, the City is looking for opportunities like that.

Mr. Pipp asked if they had investigated pervious surfaces, possibly in the center of rotaries with a basin underneath to hold water. Mr. Lussier responded that it was an interesting idea. He explained that the City has done some experimentation with pervious pavements and pervious concrete, and they have not gone amazingly. In front of Franklin School on Washington Street, he explained that it was done as a demonstration of pervious concrete, and within five to six years, it essentially disintegrated and had to be replaced. The salt runoff from the school seemingly did a number on the concrete.

Mr. Pipp asked about pervious asphalt and whether Mr. Lussier believed it was as affected by the salt as concrete. Mr. Lussier said it is not as affected, but the salt and sand do get down into the pores of the pervious asphalt and eventually clog up the pores, which are hard to correct. He continued by saying there seems to be better success with pervious concrete and asphalt in the south, where they do not have to contend with the salt and sand. He added that the exception would be the pervious pavers as he believed those do marginally better.

Mr. Winograd asked if there was a significant storm, what the expected flow course was for the flood waters would be. Mr. Lussier explained that Roxbury and Franklin Streets will still experience temporary, localized flooding. That will continue until the Church Street, Edwards Street, and Gurnsey Street lines are redone. Pako Ave and Colonial Drive are also known flooding areas due to pipe capacity. Water Street and Main Street are also bottlenecked when water enters Main Street.

Ms. Diana Duffy said she has nothing but praise because, during her time at Keene State, she frequently referred to the floodplain maps put out by the City and Mr. Lussier's office. She wondered how often the floodplain maps get updated. Mr. Lussier said FEMA is responsible for updating and publishing those materials. He explained that FEMA started an update for the Connecticut River Valley about four years ago. The City is still waiting to see what changes have happened, but eventually, they will get updated flood insurance maps.

Mr. Redfern asked as they devised remedy projects; he wondered where all the water goes. Mr. Lussier joked that it would go to Swanzey and that once it leaves the town of Keene, it will no longer be his problem. He explained that the Ashuelot River almost entirely drives the flooding along Beaver Brook. Ashuelot River has a particular capacity. If the Army Corps discharges Surry Dam at bank full conditions, then water in the Ashuelot River and Beaver Brook has nowhere to go, so it overflows. He noted that the flooding over the past years has not been caused by the river not accepting any more water, but rather by the too-small pipes running from the street to the river having reached capacity. Mr. Lussier explained that the Beaver Brook Hydraulic Study looks at more global issues and potential options.

Councilor Bryan Lake thanked Mr. Lussier for coming and wondered if he would be available to discuss how the City balances cost versus effectiveness and longevity. Mr. Lussier explained that all of their projects are being designed for a 25-year storm event based on the Cornell University Extreme Climate Models. Generally, they can do that and find that more than trying to compromise on the design, they are compromising on the timing. Some projects have been pushed back because the project in front of them was more expensive than they had hoped, while others, like Key Road, have been pushed up because of changing priorities.

Mr. Clair Oursler asked if the City maintained any rainfall data. Mr. Lussier said they do have rain and river gauges they use, but they do not maintain rain data on their own. They refer to other public sources of rain information. He explained that they generally use Cornell data and refer to that. Councilor Ed Haas commended Mr. Lussier on using Cornell Data, stating it is the best. He suggested the City focus on channel and culvert maintenance and keep them as clear as possible.

Mr. Winograd asked how wastewater fits into all of this. Mr. Lussier said wastewater is unrelated to stormwater; the sewer system is separate. He explained that Mr. Winograd was referring to a problem with the substation, which takes all the sewage from the City of Keene and Marlborough and pumps it through a two-mile-long pipe down to the wastewater treatment plant at the Southern end of the airport. There was a leaking gate in that pump station, and because of how it was

designed and built, they could not shut it down. It can be shut down for 60-90 minutes before raw sewage starts overflowing into the City's streets. Since they cannot shut it down, it required a temporary fix on that valve. They were able to get the leak down to only a few gallons a minute and managed that with little pumps in the pump station. They are currently working on a long-term fix where they would build a bypass around that faulty gate. The committee thanked Mr. Lussier for his time and his presentation.

Councilor Haas asked if there is any outreach to homeowners or business owners in flood-prone areas. Ms. Mari Brunner said the City participates in the community rating system (CRS), and a large part of that is outreach and education. She explained that Mike Hagan is the Certified Floodplain Manager and that he would be the person to connect with about that.

4) **Work Group Report Outs**

A) Community Solar

Mr. Nuru had to leave before the report outs.

B) Grants, Fundraising, and Partnerships

Mr. Redfern said he had nothing to report at this time. He wondered if Mr. Luse had additional success or whether there was any update on AmeriCorps. Mr. Luse said AmeriCorps is a dead-end at this point.

Mr. Redfern asked if Mr. Luse wanted to contact Southwest Region Planning Commission. Mr. Luse said he did not have the time to do so. Mr. Redfern said it was possible for him to do so, but Mr. Luse was hesitant because he was not confident it would go anywhere.

C) Education and Outreach

Mr. Luse shared that they are working on some materials for marketing community solar and the energy plan. They hope to have them ready for the energy fair at the end of the month.

Ms. Carolyn Jones shared that the Keene Clean Energy Team's Button-Up Workshop is set for Wednesday, September 25th, from 6:30 p.m. to 8:00 p.m. at the Keene Rec Center. NHSaves put on the event, which has been included in the newsletter and the clean energy board. She requested that members post about it on social media to help promote it. She is also looking for additional volunteers to assist with setup.

D) Legislative Tracking

Councilor Lake said he and Mr. Pipp had met recently and discussed plans they want to work on this fall. They plan to look at the action plan in the Sustainable Action Plan, and since this session

is quieting, some of their focus will be on being proactive for the next session. They discussed potential collaborations with Clean Energy, and whether there was anything in the City that they could tackle. He gave the example of EV-ready and solar-ready guidelines, especially given that there is now an ordinance. He believed there might be opportunities to pursue more of that. He added that they are looking for more members to join their workgroup and have room for three more members. Their next meeting is September 17th at noon. He requested that interested members message him. Ms. Brunner offered to connect him with SolSmart, saying they might have resources for the solar-ready guidelines. Mr. Redfern asked if Councilor Lake knew that Councilor Phil Jones had been reassigned to the transportation committee and suggested bringing him in.

E) Food Security

Dr. Russell shared that the focus group on food waste will be tomorrow. He expects a good turnout and anticipates that a workgroup will emerge. He plans to report back on the event next month. He also shared that the group working on a community garden has run into roadblocks on potential sites. The group comprises Dr. Russell, the Cheshire County Conservation District, Monadnock Farm and Community Coalition, and Community Garden Connections. They are working with an Antioch Alum on her dissertation on Environmental Communication through a school in New Zealand on a survey to gauge interest from the community in community garden spaces.

Ms. Brunner asked Dr. Russell if he had looked at 169 Church Street. It is in the floodway, and the current owner had an approved site plan that has since expired. While many things are not allowed in a floodway, community gardens would be allowed.

5) Review of Keene Energy Plan Pillars

Mr. Luse referred to the roadmap included in the agenda packet saying it is a great reference that outlines the committees' strategies and how they plan to enact those strategies. He urged members to review it as a way to help refresh their memory of the mandates.

- 6) Monadnock Clean Energy Fair - September 28th from 11:00 am- 4:00 pm at the Dillant-Hopkins Airport**
- 7) Keene Clean Energy Team Button Up Event - September 25th from 6:30 - 8:00 pm at the Keene Rec Center**

Jack Lamont had flyers and promotional materials for those interested in helping spread the word. He is also looking for additional volunteers.

Councilor Lake distributed a sign-up sheet for tabling at the Keene Clean Energy Button Up Event.

Chair Luse shared that Clean Energy New Hampshire has their 20th-anniversary celebration in Bedford in the evening on September 19, 2024. He also shared that the Local Energy Solutions

Conference is coming up in Manchester on November 1st. Ms. Brunner believed they had four tickets available. Anyone interested in attending can contact either Ms. Brunner or Ms. Fortson.

8) Vision Keene Project Update (KeeneMasterPlan.com)

Ms. Brunner shared that the project is moving forward. The next input opportunity will be the Future Summit on October 5th in Heberton Hall at the Keene Public Library. She shared flyers with committee members and explained that the event is scheduled from 9 a.m. to 12 p.m. They are looking for people to join a team for each of the pillars. She stated that anyone interested in attending register for the event ahead of time to give them an idea of how many people plan to attend.

9) New Business

Ms. Brunner said the Public Works Department has requested a letter of support from the ECC for the downtown project. She explained that funding is available through the Northern Border Regional Commission Timber for Transit Program to use mass timber produced in the United States for transit-related projects. The City is applying for a grant to obtain timber wood for the parking structure and solar panels that are going to be constructed on Gilbo Avenue as part of the Downtown Infrastructure Project. She noted that the letter is needed by Thursday. Mr. Luse shared that he has already drafted it.

Councilor Lake asked if the original intent of that parking structure was for it to be made from wood. He envisioned it being made from concrete or steel. Ms. Brunner said that this grant would pay for the cost of the timber. She talked to someone who works on this project and explained that mass timber is a more sustainable construction material with increased longevity.

10) Next Meeting: Wednesday, October 2, 2024, 8:00 am

11) Adjournment

With no further business, Chair Luse adjourned the meeting at 9:05 AM.

Respectfully submitted by,
Amanda Trask, Minute Taker

Reviewed and edited by,
Megan Fortson, Planner