- Meeting begins at 6:03 pm
- 39 Participants
- Introduction of presenters
  - Ashley Krulik, Sustainability Coordinator at the Town of Falmouth
  - Sara Mills-Knapp, Director of Sustainability at Greater Portland Council of Governments
  - Kelly Rehberg, Sustainability Coordinator at Greater Portland Council of Governments
  - o Max Zakian, Climate Action Planning Fellow at Greater Portland Council of Governments
  - o Hannah Baranes, Sea-Level Rise Researcher at Gulf of Maine Research Institute
- Introductions of present members of Climate Action Planning Committee, formed by group of community stakeholders:
  - o Dave Low
  - o Pete Lafond
  - Kate Kiblansky
  - o Grace McNally
  - Rich Bicknell (chair)
  - o Chan Sinnett
- Ashley gives a quick overview of climate term definitions:
  - Climate-related hazard
  - Climate-related impact
  - Adaptation
  - o Vulnerability
  - o Resilience
- Ashley sends out initial poll asking:
  - What climate hazards are you most concerned about? (choose up to 3 answers)
    - 31 total respondents
    - Drought 12 votes
    - Extreme Heat 6 votes
    - Flooding 11 votes
    - Intense Summer/Winter Storms 19 votes
    - Ocean Acidification 8 votes
    - Sea level rise 20 votes
    - Worsening Water Quality 11 votes
    - Worsening Air Quality 7 votes
  - How concerned are you that climate change will affect you personally?
    - Very concerned 18 votes (58% of votes)
    - Somewhat concerned 12 votes (39% of votes)
    - Not concerned 1 vote (3% of votes)
- Falmouth CAP Overview
  - Data collection
    - Greenhouse gas emissions
    - Community demographics
    - Climate hazards
  - Set CAP targets
  - o Identify actions and implementation plans
  - Engage community to prioritize actions

- o Ensure community understands actions being taken
  - Climate lecture series, public workshops, and other events to involve community and gather public input
- Integrate considerations into municipal processes
- Timeline: 12 months
- Partnership with GPCOG to provide analysis and guidance in process
- Max gives overview of current progress in CAP process
  - High level Summary of GHG Emissions Inventory
    - Catalogue of direct emissions produced by town annually
    - Purpose of analyzing greatest sources of emissions, guiding emissions reduction strategies
    - Collected data from community sources (on-road transportation, stationary fuel combustion, etc.) for 2019
    - Collected data from municipal sources (building and facility energy usage, municipal fleet fuel consumption, etc.) for 2019
    - Total community emissions of 2019: 141,126 metric tons
    - Comparison to total emissions of 2007 inventory: 161,900 metric tons
    - Town set a 2% annual emissions reduction goals, and appears to currently be reducing GHG emissions by 1.1% annually
  - Vulnerability Assessment Report
    - Identifies most vulnerable populations, infrastructure, and ecosystems
    - Identifies current climate impacts, severity of future climate hazards
    - Guides which assets and hazards to prioritize in climate action planning process
    - 1:1 interviews conducted with department heads to gauge departments' initial concerns, current plans underway, and requests for further information
- Public comment: Steve Merz asks if carbon figures included school district activities
  - Max responds school emissions are included in community and municipal GHG inventory
- Sara provides overview of Maine's social vulnerability index
  - o 17 factors (elderly, low income, etc.) contributing to vulnerability to climate hazards
  - o Vulnerabilities analyzed using census data. Local insight is necessary to fill in gaps
- Hannah provides overview on future changes to sea level rise and coastal flooding
  - Maine is dedicated to a "commitment to manage" 1.5 ft sea level rise by 2050, 4ft by 2100
  - Sea level rise projection from NOAA, with low, intermediate, and high scenarios
  - Flooding scenarios in Portland
    - Portland data used because Falmouth does not have a tide gauge
- Public comment: Dan Marks asks what it would take to make a tide gauge in Falmouth
  - Hannah says Portland's tide gauge has been collecting data for 100 years, but making a local gauge in Falmouth would be helpful to collect local data
  - Sara mentions Casco Bay Estuary Partners is considering building local tide gauges to help with data collection.
  - Sara mentions citizen science program, where residents collect high tide data to send to groups like GMRI, to provide localized data while engaging citizens in grassroots climate action
- Sara provides overview of Maine's climate hazards and impacts:
  - Hazard: Warmer, more variable temperatures

- Impact: heat-related illness and public health impact
- Impact: vector borne diseases and pest population booms
- Impact: changing natural resource economy, winter tourism industry, fishing trends
- Hazard: changing precipitation, both frequency and intensity
  - Impact: worsening water quality from intense stormwater runoff
  - Impact: increased drought risk
- Hazard: increased weather intensity, powerful storms
  - Impact: strain on critical infrastructure not designed for high intensity winds and storms
- Sara provides overview of key Impacts and concerns for Falmouth
  - o Sea Level Rise threatens Town assets and communities
    - Town Landing and private marinas
    - Coastal neighborhoods such as The Flats
    - Wastewater infrastructure (pump stations, treatment facility, manholes)
  - Coastal Erosion affects soil quality
    - Increased risk of artificial landslides along waterways
    - Impact on water quality
    - Degradation of wetland ecosystems such as eelgrass beds
  - o Inundation from inland waterways and precipitation
    - Maine infrastructure less prepared for storm surges than impacts such as coastal flooding
    - High precipitation contaminates freshwater sources
    - Intense storms flood roads and houses
    - Storms damage infrastructure such as power lines and bridges
  - Public Health Risk from Rising temperatures
    - High heat days increases risk of heat stroke
    - Increasing pest populations and higher risk of disease transmission
    - Lack of resources for vulnerable populations (eg. elderly more susceptible to heat stroke)
  - Strains on Electricity grid capacity
    - Higher demand for AC/public cooling centers
    - Increased power consumption as community electrifies
    - Brownouts increase vulnerability of energy dependent municipal services
- Ashley provides overview on plans underway by the Town to improve community resilience
  - o Information Systems team working on Broadband back-up to reduce reliance on poles
  - Wastewater asset management plan underway to plan comprehensive climate action
  - Town landing resilience study to adapt to sea level rise
  - Culvert upsizing and replacement, storm drain expansion roadmap
- Ashley discusses Falmouth Demographics and social vulnerability
  - Population of 12,444 in 2020
  - Projected growth of 16,000 by 2040
- Maine Social Vulnerability Index: demographics maps using census data showcasing 6 key vulnerability factors
  - Elderly population (aged 65 and over)
    - 18.7% of population aged 65+
    - 27.8% of elderly population live alone (5.2% of all households)
  - People of color and/or Hispanic

- 4.3% of population non-white
- 0.8% total households speak limited English
- Households with 1 or more people living with a disability
  - 7.5% of population live with disability
  - 16.7% of households have 1 or more resident with a disability
- o Renters
  - 14.6% of households rent
  - 11.2% of renting households have no vehicles
- Cost-burdened households (paying 30% of monthly income or more on housing costs)
  - 27.8% of households in Falmouth are considered cost-burdened
  - 55% of renters in Falmouth considered cost-burdened
  - 23% of homeowners in Falmouth considered cost-burdened
- Maps show East Falmouth appears to have a larger vulnerable population (renters, no vehicle, living with disability)
- Sara provides overview on Specific climate hazard data and impacts on Town Assets
  - Flooding and Sea Level Rise map:
    - State data sources on coastal sea level rise projections
      - Flood factor for inland flooding
      - Overlayed critical infrastructure on map (pump stations, police stations, significant town assets, etc.)
      - Focus on Presumpscot River inland waterways to highlight inland flood risk
      - Focus on bridges to islands (like Mackworth Island) to highlight bridges and roadways threatened with flooding.
  - Land Cover map:
    - High level view of public land, forested lands, built/impervious spaces, tidal marshes, and eelgrass beds
    - Tidal marshes and eelgrass beds act as natural storm buffer and carbon sink
    - Town owns over 2500 acres of public land
  - Change in Eelgrass beds 1997-2020.
    - Over 6500 acres of eelgrass lost along Maine coast
- Public comment: Dave asks if a focus on sea level rise maps mean we have decided this is the area of most concern
  - Sara answers sea level rise is only one aspect of flooding being considered
  - Ashley answers there is a lot of data on flooding but many hazards, such as high heat, are also being considered
- Public comment: Pete Lafond asks whether air pollution was modelled in impervious surface map on air pollution model
  - Sara answers there is no air pollution map for this workshop, but the climate action plan will have an air quality map
  - Ashley notes the Maine DOT is working on an air pollution map as well
- Sara introduces Interactive Mapping Exercise
  - Online interactive map of Falmouth, accessible by link added in chat
  - Participants can drop points on the map to show concerns
  - o All types of input are welcome
  - Ashley shows an example of adding a pin to the map (Town Landing flooding)
- Interactive exercise involves breaking into groups to hear public input on climate concerns
- Ashley opens 3 breakout groups, allowing participants to join group of their choice:

- Community Resilience Ashley Krulik to facilitate, Kelly Rehberg to report
- Infrastructure Dave Low to facilitate, Max Zakian to report
- Natural Resources Pete Lafond to facilitate, Sara Mills-Knapp to report
- Breakout Rooms speak for 25 minutes, return to main session
- Reporters (listed above) summarize their Breakout group discussions
- Reports of each breakout room are listed at bottom of this transcript
- Ashley sends out a second poll on climate concerns to see if anyone's opinions have changed after workshop
  - After today's discussions, what do you think are the priority hazards for Falmouth? (choose up to 3 answers)
    - 30 total respondents
    - Drought 5 votes
    - Extreme Heat 11 votes
    - Flooding 15 votes
    - Intense Summer/Winter Storms 22 votes
    - Ocean Acidification 4 votes
    - Sea level rise 17 votes
    - Worsening Water Quality 9 votes
    - Worsening Air Quality 7 votes
  - $\circ$   $\;$  How concerned are you that climate change will affect Falmouth?
    - Very concerned 18 votes (60% of votes)
    - Somewhat concerned 11 votes (37% of votes)
    - Not concerned 1 vote (3% of votes)
- Ashley moves subject to community resilience grants
  - Grant from governor's office of policy innovation and the future (GOPIF) to fund community resilience action
  - March 22 deadline
  - 2 applications a year
  - Grants of up to \$50,000
  - o Grant proposal is community driven to encourage public participation
  - 72 actions to choose from
  - Climate Action Planning Committee narrowed list down to 4 priority strategies to present to workshop
    - Strategy A: Accelerate transition to electric vehicles
    - Strategy D: Support Maine's natural resource economy
    - Strategy E: Protect natural and working lands and waters
    - Strategy H: Increase public awareness of climate change impacts and opportunities to take action
- Ashley lists community actions prioritized by Climate Action Planning Committee
  - Strategy A: Install EV fast charger in high use area
    - Incentivizes EV purchasing
    - Aids in community GHG emissions reduction, reduces community exposure to air pollution from vehicle emissions
    - Will likely involve partnership with supermarket like Hannaford or Shaw's
    - Partnership with EVgo or other private entity to install charger
  - Strategy D: Support Local Food Production through development of a community garden

- Supports Maine Won't Wait's 30% local food consumption goal
- Reduces GHG emissions associated with production and transportation of food
- Supports food security for New Mainers, low-income residents
- Food growers could open farm stands to sell produce to the community
- Would involve partnership with existing organizations in town, such as Cultivating Community's Hurricane Valley Farm, where New Americans grow food from their countries of origin
- This project can be applied for in September to allow time for further planning
- o Strategy E: Support Falmouth Strategic Watershed plan
  - Provides funding to recommended action for Town watershed plan
  - Fund geomorphic data collection and assessment of waterways
  - Evaluate stream disturbances that have impacted health and develop actions to improve and restore water quality
  - Will preserve and restore ecosystem health
  - Maintaining water quality would benefit entire community
  - Cost of \$50,000 to fund geomorphic analysis
- Strategy H: Increase public awareness of climate change impacts and opportunities to take action
  - Increasing awareness of climate impacts is necessary for successful initiatives
  - Education of actions may help facilitate community cultural shift towards climate resilience
  - This strategy can be added to supplement one of the other 3 actions
- Ashley launches a poll for community participants to decide between 3 priority actions (education excluded, as it will be a supplement for decided action)
  - Please select the community action you view as the highest priority for these grant funds
    - 25 total respondents
    - Install EV fast charger to assist with transition to electric vehicles 7 votes (28% of votes)
    - Support local food systems to make fresh, affordable food more accessible 9 votes (36% of votes)
    - Support the Falmouth Strategic Watershed Plan by completing Geomorphic Data Collection and Assessment – 9 votes (36% of votes)
  - Results show action for watershed plan and supporting local food growth are tied for first.
  - Ashley comments there are 2 grant cycles in the year, and this poll has highlighted the 2 most popular priorities for the year.
  - Sara comments all these actions will likely be addressed in Climate Action Plan; this is just to gain more funding to tackle them sooner.
- Ashley highlights next steps moving forward
  - Synthesizing results, feedback, and responses
  - Interactive map will be posted to CAP website
  - Map will be open for 2 weeks after posting for other community members to participate (map will be advertised on social media and other Town news sources).
  - Finalize Vulnerability assessment Report and GHG Inventory after gathering community input
  - Next steps will be to write full Climate Action Plan
  - Along the way: talks, workshops, and other forms of community engagement.

• Meeting Adjourned 7:52 pm

## **Breakout Groups**

## Infrastructure breakout group

- Wastewater infrastructure has evolved over time, building out along coast. Water collection systems, interceptor sewers which are along the coastline.
  - Dan Marks of wastewater department mentions an interceptor sewer by Town Landing he is worried about, right by Dockside restaurant
  - Sewer lines along ground are vulnerable to erosion, seepage into groundwater, water infiltration
  - Manholes by coastline are going to be flooded, permanent access loss
    - Manholes on Bayshore are basically on the beach, threaten to overflow Brown Street pump station
  - Wastewater asset management plan is underway, need for baseline data gathering along coast to determine vulnerable interceptors
  - Wastewater treatment plant isn't directly at risk from sea level rise, and treatment plant can handle the increased capacity needs of storm surges seen in area so far. Extreme high flow events won't overload system if they continue to only last a few hours.
  - Only sanitary water is run through treatment plant. Stormwater is not treated by wastewater department. Increased storm intensity has not yet caused an issue of overflow, where stormwater runoff contaminates other sources
- Storm drains
  - Systems in Maine are designed for consistent precipitation and long lasting (24 hour) events, not for quick flash flood events that last a few hours. High intensity storms that will become more common due to climate change may require new types of infrastructure
  - Streets built with catch basins to collect stormwater usually only have 1 or 2. Streets susceptible to flash floods will need much higher capacity.
- Town Landing and Harbor management
  - Rising tide leads to flooding of Town Landing and parking lot. A resilience study is being completed to determine how to protect access to mooring for commercial and passenger marine vessels. Will likely require raising of parking lot and pier
    - John Kilbride of police department calls this an issue that will come to a head 10-15 years down the road. Dave Low, who is facilitating the session, argues it looks more like an issue that will need to be addressed 5 years from now.
  - Harbor is worried about severe summer storms, and the increasing chance of hurricanes reaching Maine coast. Harbor floats can sustain 45-mile winds, but 55+ mph winds can overwhelm harbor infrastructure
  - Current state reporting on wind speeds is becoming less accurate. One morning, when weather was reported to be calm, the Town Landing saw 70mph winds that destroyed a quarter million dollars' worth of float infrastructure
- Roads flooding during intense storms
  - There is risk of locations being isolated from flooded storms but planning for that is consistently changing. Resources are placed in neighborhoods to meet changing needs

- Much of the town is higher elevation inland, but Falmouth Road specifically went under during an intense weather event, forcing shut down of operations at Town Hall. Culvert expansion can hopefully help alleviate road flooding risk
- Blackstrap road bridge over Presumpscot River (run by Maine Department of Transportation) is high elevation, has issue in one supporting column that intense weather could further degrade
- High groundwater instability in rain. There was discussion about reinforcing armoring of slopes along roads like Falmouth Road to protect pavement
- First responders during weather events
  - There are current plans to add staff to fire department, expanding Fire/EMS service overall
  - Nathan Poore, Town Manager, is concerned about the number of first responders who don't live in Falmouth itself. During a severe or even catastrophic weather event that affects the region, first responders will face difficulty, even danger, coming to the Town to provide support
  - First responders may also be faced with choice between traveling to the town they work at or staying in their home communities to supports their neighbors and families
  - Lack of affordable housing, and any new housing development in general, in Falmouth is forcing public safety departments to rely more and more on commuting staff
- Electricity grid infrastructure
  - o There is a power station on Johnson Road that may be susceptible to flooding
  - Power lines in general are vulnerable to increased wind speed. Wind can knock down poles, or knock trees and debris into power lines, which will cut off power to individual houses or neighborhoods
  - When asked, participants did not have many suggestions, and municipal staff in discussion admitted they did not know much regarding vulnerable substations or power lines
  - As storms grow more intense, this is worth looking further into, especially as public safety department like Police and Fire EMS begin electrifying their vehicles
- Residential Buildings
  - How can we incentivize/help landlords to make their buildings more efficient and lower heating/cooling costs for tenants?

## Community Resilience breakout group

- Schools and kids
  - Concerns around the increasing temperatures. Some schools have AC but buildings can still get warm. However, sending kids home on high heat days may make it worse since many families at home don't have AC.
  - Not much information to understand the changing insect/species piece on climate change and what schools can expect. Especially shifting around the way we manage the grounds and areas around the schools
- Seniors
  - Aging community is a big part of the population and community needs to find ways to help them react to changes due to limitations (i.e., physical mobility, vehicle mobility, heat, access to medications)

- EMS response hasn't seen a huge increase in calls due to heat, but most calls come from seniors living alone. EMS has seen a number of cold person calls in the winter, especially from seniors
- Changing temperature Effects
  - There was a comment that high heat days lead to more swimming which leads to more drowning. We need to sometimes think about the indirect effects as well.
  - On extreme weather days (hot/cold) a larger number of walkers come into rec center, library, etc. so more heat pumps are needed at certain locations for heating/cooling centers
  - It is important to learn where seniors and vulnerable population go on high heat/cold days or power outages to manage resources more effectively
- Food Insecurity
  - There was a discussion around food insecurity for students; however, it is hard to know how many students are food-insecure due to changes in policy reporting
  - The food pantry has seen an increase over the pandemic
  - Cooperative extension is putting in an extra greenhouse to help community
- Lack of public transit in most parts of Falmouth. Even if there was one, would we still use it?
  - Need to bring transit to people who don't have access but fixed route buses probably won't be that successful
  - Town is ready to pilot a ridesharing program along Route 1
- Communication
  - Discussions around how to reach seniors and those living alone, and communication with the public in general
  - Participants were curious on what specific actions residents and organizations take. There needs to be specific tasks or a clear set of actions for people to take. The schools could also use a day-to-day liaison to help keep moving sustainability initiatives forward and stay up to date on communications with the town

• Brief discussion on how many of these things are interconnected – for example how the rising cost of heating oil may tip someone into food security and poverty and greater health risks because they can't afford everything. Worried about how people can respond but also what we can do to prepare

## Natural resources breakout group

- Cataloging impacts on natural resources
  - o Town landing
  - Water quality at beaches, and concern of runoff after storms
  - Impacted streams, some are categorized as impaired (I think watershed plan would address these)
  - Up the Presumpscot River there are significant eel grass beds and mud flats, concern about eel grass beds and shellfish with additional sea level rise-add in vulnerability information about eel grass beds and how to protect or conserve-concerns about a slime covering eel grass at town landing in Falmouth, invasive species because of warming water?
  - Importance of aquaculture and defining the benefits and risks it can bring to the town and intertidal

- School campus in Falmouth (elementary and middle school): there is significant over paving and too much impervious surfaces, the runoff from this area may threaten the wetland buffer areas around the playgrounds, pollution from runoff may impact water quality
- Northwest Falmouth wells go dry during drought water table resources, deeper wells needed for developments
- Look at Highland Lake conservation group and cite them in report
- Concerns about trail closures and weather, impact of pests, ticks, etc. on natural resources and ability to access them should be highlighted in report. How will pests shift the ability to enjoy natural resources?