

Vulnerability Assessment Feedback Summary

Feedback from task force meeting on April 13, 2023

- General questions/comments about VA document
 - How will this assessment be shared?
 - The vulnerability assessment will be an appendix to the plan
 - A summarized version will be included in the plan
 - Plan seems more hazard-focused vs population focused.
 - Second chart of the framework is confusing. Could use more explanation
 - Section on drought and wildfire is very thorough. Usually an area that is overlooked when the focus is on sea level rise
 - One thing that is not mentioned is the Impact of northward migration by people leaving locations where Maine becomes a more desirable place to live. Difficult to measure but it is happening. **Wealthy people have the means to relocate. Important equity factor. Should be mentioned in the assessment.**
 - Would be helpful to include more information on Housing affordability.
 - What information is available from the Housing Task Force?
 - Need to add more to natural impacts section
 - Pests - expand this section (with information from Bev and Maxim)
 - Ex. termites
- Fortunes Rocks and Biddeford Pool
 - Very concerned about the loss of beach, tide is already sweeping up over the dunes
 - Parts of Biddeford Pool will be an island at some point
 - The income or retirees can be misleading they can have a lot of assets even if their income is low
 - Even if this is not as socially vulnerable an area it is important to the community
 - Important area for municipal tax base
 - Desirable area
 - UNE is there
 - There is tourism in that area
 - Community needs to protect that asset even if folks there are more wealthy
 - Beach loss
 - Community in this area is shocked by the loss of beach
 - Images of this beach loss in this area in the photo voices contest
 - Tide sweeping up over the dunes

- Flooding of Mile Road
 - Looks like the Pool will become an island in the future
 - It would be good to get some information about the proportion of second home ownership in Fortunes Rocks Beach
 - Maybe the town has this data?
 - This could get at adaptive capacity, do folks in that area have another property to retreat to
- Recent study looked found that a lot of coastal real estate is overvalued based on projected flood risk, federal flood maps don't reflect the true scope of risk
 - Megan will share this study with us
- Other areas that are vulnerable?
 - Natural assets
 - Clifford park – development happening on part of that land
 - Rotary Park near the river
 - Loss of indigenous/native plants
 - These plants are more resilient maybe to climate change than nursery species
 - Bev will look into this
 - More information is needed on how climate impacts socially vulnerable people – especially people of color, immigrants and refugees, people experiencing homelessness
 - New Mainers
 - does the city have info about this?
 - In general there should be more information about people of color
 - At least 10% of the city is BIPOC so even if that's a small percent it's still thousands of people
 - Need to hold the city accountable and make sure they aren't left out
 - Unhoused people
 - Social vulnerability index
 - Portland and So. Portland recreated the Maine Social Vulnerability Index for One Climate Future with Eileen, updated the data
 - We could contact them and see if this is doable for us
 - Instead of just the table and block group map we could have a paragraph about the most "important" populations and make a map for that
 - (Megan) The point of a vulnerability assessment is to clearly communicate the hazards and vulnerabilities and where they intersect. We need to show that intersection. (I think she was saying this in support of using an index, that that could help us show the intersection better?)
 - Condense the table and just pick out the most important
 - (there was some discussion here about how to make this document clear, understandable and readable for the broader community. I think we got away from discussing that this document is an appendix to show the underlying data and that we will use it to summarize and display the information in a digestible way.)
 - Add information about cost burdens
 - Clearly identify intersection about hazards and vulnerability
- Anecdotal information
 - City has information about about sewer separation, separating sewer runoff versus stormwater runoff

- This **past winter** was weird, less snow didn't feel like a Maine winter
- Saco river – how much wastewater is dumped into there, we are drinking the same water as we are putting waste into, could be problem. 35 towns on the Saco River get their water
- Gardening zones are changing – Bev will send us some stories about **gardening**
- Seeing **more ticks** than ever before in the past two years
- Mental health – (Max) librarian kept giving him letters about **kids' climate anxiety**. It's impacting people on a daily basis and impacting the well-being of children. Feeling of dread, nothing being done because they don't know that anything is being done. Children are giving notes to librarian in Biddeford
- Block group 3 - most people seem to be wood burners, pellet, bio brick
 - It's a challenge to get that data
 - Town could collect that information? Is it in assessors data?
 - Could survey people about it
- Helpful to have the big picture to have all the data in one place
- **Waste site on Saco island** from the tannery, flooding - in general is there a risk of contamination from brownfields sites?
- Could include information about **brownfields** (rotary)
- **Landslide risk** along the river, landslide in westbrook construction material facility collapsed into a river, erosion on riverbanks could be threats to landslides
- Community values
 - Continue localizing the data and key takeaways (i.e. key takeaways for housing are not very easy to understand the local impact)

CCVA Community Engagement Discussion

- How and when will this be made public?
 - The document will be public on our website
- How can this be summarized in more useful materials for the public
 - Focus groups
 - Complex, technical, emotional so how to share this folks recognizing this
 - Can it be broken down into different categories different people will care about? IE Private wells, drought?
 - So many threads, hard to keep track
- Who do we most want to engage and in what way?
 - Pick a few strategies to reach folks
 - Could be geographic areas or populations
- Share the finished resource but **share it in the context of the process**, this is step two of three 1) GHG 2) CCVA 3) pulling it all together in the plan
 - Public event at engine
- Ongoing **presentations to various community groups** (i.e. chamber of commerce)
 - Could shift the topics of these and present the key takeaways from the CCVA
 - the overall key takeaways would be helpful to share with these groups (executive summary)
- **Tabling** at larger events like the pollinator festival
 - Could share an executive summary of CCVA
- Could create **one pagers for specific groups** i.e. a CCVA one page for land trusts with the information that is most relevant to them
- Concern about presenting people with the problems without any solutions

- people will say “what will we do” could shut people off
- people want their issues addressed, they want answers
- We could structure this similar to the GHG memo which presented the information and at the end presented some overarching strategies for actions.
 - could also include guiding questions to help start a conversation with folks
- Could also include what’s already going on to address these issues
 - Like cooling centers, upsizing culverts (Biddeford pool)
- Emphasize that the City makes decisions every day and the climate action plan gives them a climate lens to guide those decisions to address these issues
- Originally the TF discussed Focus groups to talk about climate actions and the CCVA, with draft of potential strategies
 - This approach is the best way to talk to the most impacted groups
 - Go to the neighborhoods or work through an organization to reach people we wouldn’t reach otherwise
 - Need to figure out who these focus groups are with, and what capacity there is on the TF how many can they do?
 - Who do we need to partner with? who are the trusted connectors?
- Survey update
 - Survey is translated and Zoe is doing targeted outreach to top 4 language groups besides in English to get a broader range of perspectives
 - Survey will be ready next Friday (21st) to promote at photo voice event, could be good to have hard copies and QR code at event
 - 200 responses in respectable number (Carol probably wants more) Zoe is more concerned with getting a broad range of perspectives that total numbers

Feedback from Guiding Document

- Social Vulnerability
 - What’s missing
 - Pg. 2, bullet points should include: “invasive marine or other plants, marine or terrestrial animals and insects”
 - Pg. 13, Household Heating Fuel Types do not include: wood burning stoves, pellet stoves or bio-bricks as well as heat pump or other sustainable alternatives
 - Pg. 23, 3rd bullet point is misspelled “.as “Noraster”, should be “Northeaster
 - I really think there should be some form of social vulnerability index describing why different vulnerable groups are more susceptible to climate change. This is a document meant to explain vulnerabilities, it has to explain why certain groups are vulnerable to certain conditions.
 - There is also very little in this social vulnerability chapter talking about socially vulnerable populations, particularly people of color and New Mainers, which are an already historically under-represented group in Maine.

- The demographics of Block Group 13 is changing dramatically. The addition of 300+/- upscale housing units is making the area much more affluent. An additional 600+/- will come in the next 24 - 36 months.
 - The concept of 'climate gentrification.'
 - Maps and Figures
 - I don't think the map showing heating fuel types is really relevant here. It might have a place in the climate action plan or GHG report, but it doesn't seem to here. If you're trying to make a case about how homes using fossil fuel heating are more vulnerable to price fluctuations, it doesn't seem like you've actually said that anywhere in the report.
 - Is one type of home heating more vulnerable to climate change than others e.g. natural gas vs fuel oil etc.?
 - The block level approach is confusing. Overlay maps (showing parts of the City with higher concentrations of vulnerable groups using census data) would be more accessible and easy for people to understand
 - The Legend of the Biddeford Zoning Map and Building Footprint might need to be changed. The odd shape of the color keys is distracting.
 - There should be a "housing affordability" map, to show the percentage of households that are cost-burdened, and less likely to be able to afford the costs of climate change (both homeowners and renters)
 - Biddeford's Mill District has a wide network of underground canals and reservoirs. Does this type of obsolete infrastructure make downtown any more or less vulnerable to climate/ flooding/precipitation events? A sketch map of these systems is available, if required.
 - Also, The river wall on each side of the Saco River in the Mill District has already shown its vulnerability during an extreme precipitation event two years ago. Should this be noted?
- Extreme storms and Precipitation
 - What's Missing
 - I feel like the chapter should start with a brief explanation of what types of assets will be impacted by increased precipitation and storm intensity. I honestly feel like the chapters would flow better if background information went first and the key takeaways section came after (or even at the end of each chapter). It just doesn't seem to make sense to me that you're describing how climate change will affect the community AFTER saying what assets in the community are most vulnerable.
 - You say inland flooding is hard to predict on page 25, but don't explain why
 - How does extreme precipitation events affect Thacher Brook, especially the Thacher Brook Management Plan? Is greater contamination of the watershed anticipated?
- **Flooding: Sea Level Rise and Storm Surge**
 - What's Missing

- Is there any way to estimate the number of Biddeford residents affected by 1.6 ft and 3.0 ft rise in sea level?
 - What affect will sea level rise/flooding have on septic systems/contamination of ground water and surface water for both residents and wildlife?
 - I'm concerned about the road leading to Fortunes Rocks Beach. The beach is directly to the east, and there is a significantly sized pond directly to the west, literally right next to the road. There's a large stream crossing built under the road leading to the beach, but I'd like to see if there is any projected flood risk in that area.
 - Maps and Figures
 - The mapped shoreline change along Hills Beach and Biddeford Pool road is a really helpful tool.
 - Maps on pp. 30 and 31 (really all maps) should be larger, perhaps full-page for good readability. Map on page 36 (Figure 14) seems particularly important.
 - In natural ecosystems, you mentioned loss of dry beach and impact of local species on page 37. There are a lot of dune grass habitats along the coasts that I suggest you mention. Dune grass is present around a lot of the built environment in Biddeford pool. A lot of it is already fragmented by current construction, and seemingly vulnerable. If the dune grass recedes more inward due to sea level rise, I worry it either will impact the housing stock currently on the coast, or the built environment will impede the migration.
- **Extreme Temperatures and Air Quality**
 - What's missing
 - For high heat days, I think the National Weather Service has numbers on the number of days above 90 degrees. It might be a good idea to list the number of high heat days in the past few years (or 2021) compared to the number of high heat days 10 or 20 years ago. It could help highlight the increasing prevalence of heat wave risk? In the public health impacts section, I would also mention that renters are less likely to have air conditioning, either because it isn't provided or their landlords do not allow them to. I also suggest adding that elderly residents are less likely to buy air conditioning because they are less likely to see the need, especially if they've lived in Maine for a long period of time.
 - On pp. 39 - 40, "...Southern maine is expected to experience roughly 4.5 times more 'exterme heat' days,..." Does this mean if there are currently 4 such days by 2050 there will be 18?
 - Table 7 Can you state 20 Century average for comparison with data presented? Gives context.
 - Missing Figure 20.
 - Kittery is shown on page 45 instead of Biddeford.
 - Maps and Figures

- I definitely think you should talk about how food and fuel prices are likely to continue increasing due to climate change. Rising food prices might be something for the natural resources/drought section, and rising fuel prices could go in the housing characteristics section. Although, since there are multiple factors that could lead to price rises, it might make sense going in the social vulnerability chapter. I also think that there could be a bigger focus on how climate change will affect the community. How precipitation will impact transportation systems and workforce commuting, a list of major sources of food/healthcare in the town and how climate change might impacts residents' access to them, etc. Also, this is very small, but on page 2, you have a little bullet list outlining the major climate vulnerability impact sections. I would suggest changing it from "drought" to "drought and wildfire risk."
- I think we should probably just go over any local spots we want to make sure we get included in the assessment. Maybe also go over the social vulnerability chapter
- An excellent document. The effort spent shows. A few thoughts regarding health impacts:
- One of the impacts of a warming climate will be increased migration northward of those species less tolerant of warmer climate. This includes human beings. There is already an expectation that those people who have the resources to move northward will do so in increasing numbers. Those who lack the resources in mostly equatorial regions will migrate in larger numbers due to drought caused food insecurities from widespread crop failures. The strain on our health resource infrastructure will be immense and very costly.
- Disease carrying insects are becoming more numerous such as mosquitoes carrying equine encephalitis and other pathogens. Covid and Monkey Pox are the beginning of greater climate warming induced pandemics. Greater emphasis needs to be placed on planning for climate change health issues at existing health centers.
- Other thoughts concerning invasive insects and other potential impacts:
- Invasive insects such as termites and other destructive pests not usually noted in climate studies are becoming more common in Maine. Termites can cause widespread and costly damage to wood constructed buildings.
- Glacial melting may release viruses and bacterium now dormant in cryptobiotic organisms formally entrapped in the glacial ice for millennia.