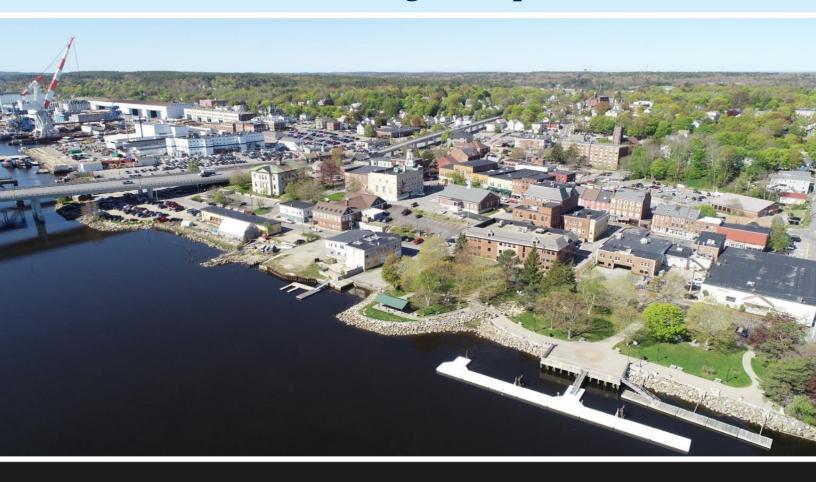


# Flood Resilience Checklist Summary Report





## Acknowledgments

Thank you to all the City Staff who contributed to the completion of this checklist and the development of these recommendations.

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# Summary and procedure

As climate change continues to progress, Maine recognizes the devastating impacts that coastal flooding due to sea level rise (SLR) will have on coastal communities. In response, the Maine Coastal Program and Maine Department of Agriculture, Conservation and Forestry created the Maine Flood Resilience Checklist, as a "non-regulatory self-assessment tool designed to assist communities [in evaluating] how well positioned they are to prepare for, respond to, and recover from flooding events and sea level rise". Being a coastal community, the City of Bath has and continues to evaluate and prepare for the impacts of SLR. This assessment was thus employed to highlight areas where the city could improve its preparedness and resilience in the face of potential damages.

Following background research on the Flood Resilience Checklist and how it has been employed by other municipalities in Maine, the checklist was divided into sections and distributed amongst respective city staff to be completed. The complied responses were supplemented by information from Bath's Comprehensive Plan and Vulnerability Assessment as well as other relevant studies and reports.

After these steps, the responses informed a series of draft recommendations that highlighted areas for the city to continue improving its flood preparedness. These draft recommendations were presented at a Department Head meeting for discussion and feedback. Specific suggestions were sought out from select city staff, as well as other experts who had experience with coastal resilience planning and implementation. The responses then informed a round of editing to finalize the recommendation language. These finalized recommendations are included below.

## Recommendations

These recommendations are sorted into categories based on the checklist classifications and listed within each group in order of priority as determined by a cohort of city staff. Primary actions represent the intended goal of the action while supplementary actions are either steps that need to be taken to achieve the primary action, or a beneficial additional action to exceed the intended goal.

#### Risk and vulnerability

This section is intended to assess the community's vulnerability by understanding the geographical extent of flooding and the impacts that this will have on people, property, and other valuable assets. It also aims to ensure this data is relayed to the necessary stakeholders and decision-makers.

The checklist demonstrated that Bath has a relatively robust system of information gathering and communication. Between the 2023 Vulnerability Assessment and other previous reports, the extent of future flooding is well documented and has been shared widely. However, more data collection and documentation following specific storm events will be beneficial for future preparedness.

| Primary Action   | Supplementary Action(s)   |
|--|---|
| Formally adopt the 2050 commit-to-manage SLR scenario into the city's infrastructure planning and community discussions  | Discussions in and out of city hall should prioritize planning for 1.5 ft of sea level rise by 2050   |
| Apply the Vulnerability Assessment flood<br>scenarios to determine the impact on particularly<br>vulnerable populations and share findings with<br>city staff and the public | Identify vulnerable populations within Bath and their relative geographical locations to overlay maps |
| Identify repetitive loss properties  | Work with the NFIP coordinator  |
|  | Identify software, tools, and training materials necessary to collect data                            |
| Develop a standardized system of documenting storm extents and flood frequencies   | Determine the threshold for what gets recorded  |
|  | Identify relevant city staff (ex. public works) to take<br>on this responsibility                     |
| Develop a standardized system of documenting storm damage and associated costs   | Identify software, tools, and training materials necessary to collect data                            |

| Determine the threshold for what gets recorded           |  |
|--|--|
| Identify relevant city staff (ex. the assessor's office) |  |
| to take on this responsibility                           |  |

#### **Critical Infrastructure**

This section was designed to understand what critical facilities may be impacted by future flooding and to ensure that these structures are accessible during or following storm events and are protected from any potential damage.

The city had relatively good documentation of which facilities may be affected and has included initial, informal considerations of flooding in some improvement plans. However, more work could be done to document critical infrastructure locations in GIS and to formally consider how updates or improvements to these structures should be updated with flood risk in mind.

| Primary Action  | Supplementary Action(s)   |
|---|---|
| Use the Vulnerability Assessment to create a prioritized list of properties that are prone to flooding and strategies to address damages    |   |
| Create a clear inventory of critical facilities that will be affected by 2050 scenarios using GIS   | Use the Vulnerability Assessment to determine<br>what other critical facilities have not been<br>documented |
|   | Create/identify maps with these facilities<br>highlighted   |
| Incorporate the consideration of flood impacts in<br>Capital Improvement Plans  | Designate a city staff person to highlight these needs  |
| Incorporate flood potential to consider relocation<br>or adaptive changes when making improvements<br>in the city                           | Develop standardized language to add to RFPs referencing the Vulnerability Assessment                       |
| Prioritize funding to cover flood maintenance costs   | Determine whether there are more economically efficient avenues than just rebuilding in place               |
| Develop city guidance on how infrastructure<br>should be constructed in preparation for flooding<br>or reconstructed following storm damage |   |

#### **Community Planning**

This section was intended to be a comprehensive evaluation of the community's resilience by examining community planning, emergency response, and resource management systems. Information regarding land use planning, hazard mitigation, and emergency management was collected to gain a holistic perspective on how the community can respond to flooding events.

While Bath has had a very comprehensive planning effort and decent disaster response systems, there are improvements that can be made across the board to ensure that residents are informed of potential hazards and risks from flooding. The city can also work to develop a more coordinated emergency response to storm damage.

| Primary Action  | Supplementary Action(s)  |  |  |  |  |
|---|--|--|--|--|--|
| Develop a flood warning plan or system, and ensure that vulnerable populations are accounted  | Identify shelter locations and create signage directing residents  |  |  |  |  |
| for   | Identify preferred modes of digital communication  |  |  |  |  |
| Develop strategies to address areas that are vulnerable to flooding   | Consider implementing a storm surge/coastal resilience zoning district, limiting development, or acquisition |  |  |  |  |
| Work with aligned agencies to develop a flooding hazard education or outreach plan  | Share with residents how to deal with flood hazards  |  |  |  |  |
| Fund a public art installation to show 2050 sea<br>level rise and flooding with physical markers in<br>downtown   | Engage members of the community to further share discussions about these topics                              |  |  |  |  |
| Consider joining FEMA National Flood Insurance<br>Program and Community Rating System or<br>StormReady designation, or develop relationships<br>with these agencies | Learn more about these designations and<br>determine whether the city feels they are<br>pertinent            |  |  |  |  |
| If the need arises, consider allowing expedited permitting or inspections for post-storm repairs  | Include guidelines to limit future damages or considerations to not rebuild due to flood potential           |  |  |  |  |
| Determine whether city hall has a role to play in limiting flood damage on private property   | If the city should be involved, consider a financial incentive for flood-proofing                            |  |  |  |  |
| Create streamlined pathways to obtain funding from FEMA or MEMA when it becomes necessary   |  |  |  |  |  |

Social and Economic Vulnerability

This section highlights the unequal spread of impacts on populations within a community. Understanding the vulnerable populations in the community as well as the economic resources the community possesses to address these threats will provide a good foundation for communities to respond to new challenges.

The city demonstrated some consideration of the different demographics and industries in the community and attempted to include them in decisions. However, there are many opportunities for the city to understand specific groups' vulnerabilities better and understand their needs in response to storm events. The checklist also highlights opportunities to create a more robust economic plan that takes into consideration how businesses can be informed of and prepare for future risks.

| Primary Action  | Supplementary Action(s)   |
|---|---|
| Assess the potential financial impacts of flooding on city infrastructure                                 | Assess the potential financial impacts of flooding on residential areas and/or business |
| Increase education and outreach to the public regarding flood events and the potential for future damages | Share 2050 daily high tide and storm surge scenario maps broadly                        |
| Identify school and emergency route impacts   |   |
| Build on CAP's outreach and collect data on how vulnerable populations will be affected by flooding       | Develop systems to ensure their needs are accounted for                                 |
| Make businesses more aware of the potential for   | Provide depth maps for downtown and connector roads                                     |
| future damage from flooding   | Discuss ways of addressing these concerns   |
| Create an economic development plan that addresses current and future flooding potential                  |   |

#### Natural Environment

This section helps identify the potential impacts that flooding might have on natural ecosystems in the community. By looking at plans, policies, and strategies that have been or will be developed to help protect vital natural resources from sea level rise and other potential coastal changes.

Bath has taken a great approach to protecting natural areas and creating a buffer between ecosystems and development. Updates to zoning ordinances and work with Kennebec Estuary Land Trust (KELT) offer opportunities to continue this work. The largest area for further work would be increasing mapping efforts, and sharing this information with residents and other relevant groups.

| Primary Action   | Supplementary Action(s)  |
|--|--|
| Cooperate with KELT and other groups to consider<br>converting plots that are prone to flooding into<br>open space or conserved land | Include consideration of the potential for<br>underground storage of stormwater or combined<br>storm/sewer |
| Further research on the impacts of SLR on marshes and other ecosystems in Bath   |  |
| Create a mapping layer identifying which properties<br>have sewer and which have septic to overlay them<br>with flooding scenarios   |  |
| Include considerations for ecosystems in post-<br>disaster recovery plans (ex. remediation for<br>saltwater intrusion)               |  |

# List of resources

- Bath Resources
  - o <u>Complete Flood Resilience Checklist and Draft Recommendations</u>
  - o <u>2023 Bath Vulnerability Assessment</u>
  - o 2023 City of Bath Comprehensive Plan
  - o Bath Flood Vulnerability Assessment Storymap
  - o Potential Flooded Roads in Bath
  - o Flood Impacts on Wetlands in Bath
  - o <u>Resilient Bath Initiatives</u>
- Other Sources
  - o Maine Flood Resilience Checklist
  - o <u>Kittery Flood Resilience Summary Report</u>
  - o <u>First Street Flood Risk</u>
  - o The Nature Conservancy's Maine Mapping Portal
  - o Maine Flood Hazard Map
  - o FEMA Flood Map Service Center

# Appendix 1. Completed checklist

|   | Risk and Vulnerability  | Y            | es           | N      | 0            | N/A | Notes   |  |                            |
|---|---|--------------|--------------|--------|--------------|-----|---|--|----------------------------|
| 1 | (a) Has your community identified and documented<br>the historical geographic extent and impacts and (b)<br>considered the potential future extent and impacts<br>of the following coastal hazards? | а            | b            | a      | b            |     |   |  |                            |
|   | Coastal and nuisance flooding   | $\checkmark$ | $\checkmark$ | Х      | Х            |     | 2023 Vulnerability Assessment                                 |  |                            |
|   | Storm surge   | $\checkmark$ | $\checkmark$ | Х      | Х            |     | 2023 Vulnerability Assessment                                 |  |                            |
|   | Sea level rise  | $\checkmark$ | $\checkmark$ | Х      | Х            |     | 2023 Vulnerability Assessment                                 |  |                            |
|   | Coastal erosion and/or shoreline change   | $\checkmark$ | $\checkmark$ | Х      | Х            |     | Somewhat through VA   |  |                            |
| 2 | Are potential sea level rise, hurricane, and storm surge inundation scenarios determined for your community?  | 、            | /            | Х      |              |     | 2023 VA - SLR, storm surge, and 100yr events                  |  |                            |
| 3 | Does your community have GIS mapping and analysis capabilities or access to GIS services?   |              | /            | >      | <            |     | DPW/ Arborist/ Assessor/ Planning                             |  |                            |
| 4 | Has the potential future extent of coastal hazards<br>been identified, mapped, and considered in your<br>community's planning?  | 、            | /            | x      |              |     | 2023 VA (past plan compilation)                               |  |                            |
| 5 | Has your community adopted a surveyed or GIS-<br>based boundary delineating the highest annual tide<br>(HAT) line for Shoreland Zoning?   | ,            | $\checkmark$ |        | $\checkmark$ |     | (   |  | GIS based HAT - State Data |
| 6 | Does your community document and archive the following information related to flooding, storms, and erosion?  |              |              |        |              |     |   |  |                            |
|   | Geographic extent of impacts  | ,            | /            | 、      | /            |     | Unsure about how we geographically document and archive this. |  |                            |
|   | Photographs of impacts  | ,            | /            | >      | (            |     | DPW/ EMA/ Planning have photographs of recent events          |  |                            |
|   | Water levels  | ``           | /            | >      | <            |     | Hohonu tide gauge at Maine Maritime<br>Museum has begun this  |  |                            |
|   | Relative location of damage   | 、            | /            | >      | <            |     |   |  |                            |
|   | Date of damage  | `            | /            | )      | <            |     |   |  |                            |
|   | Damage type   | )            | <            | ``     | /            |     |   |  |                            |
|   | Cause of damage   | )            | <            | \<br>\ | /            |     |   |  |                            |
|   | Damage costs  | )            | <            | ``     | /            |     |   |  |                            |

|   | Repetitive loss properties, as defined by the National Flood Insurance Program  | )            | <            |   | / |  |
|---|---|--------------|--------------|---|---|--|
| 7 | Has your community conducted vulnerability<br>assessments of the following categories based on (a)<br>existing and (b) potential future conditions?   | a            | b            | а | b |  |
|   | Critical facilities   | $\checkmark$ | $\checkmark$ | Х | Х | 2023 Vulnerability Assessment                      |
|   | Critical infrastructure   | $\checkmark$ | $\checkmark$ | Х | Х | 2023 Vulnerability Assessment                      |
|   | Coastal properties (public and private)   | $\checkmark$ | $\checkmark$ | Х | Х | 2023 Vulnerability Assessment                      |
|   | Society and the economy (local population,<br>historical and cultural resources, downtown areas,<br>business districts, tourism areas, etc.)  | $\checkmark$ | $\checkmark$ | х | х | 2023 Vulnerability Assessment                      |
|   | Natural environment   | $\checkmark$ | $\checkmark$ | Х | Х | 2023 Vulnerability Assessment                      |
| 8 | Does your community (a) conduct assessments and<br>evaluations of local flood hazards and associated<br>risks and, if so, (b) is that information shared with<br>the following relevant individuals, groups, and<br>programs? | а            | b            | а | b |  |
|   | Planning staff  | $\checkmark$ | $\checkmark$ | х | x | VA and floodplain and shoreland zoning ordinance   |
|   | Code enforcement  | $\checkmark$ | $\checkmark$ | Х | Х |  |
|   | Public works  | $\checkmark$ | $\checkmark$ | Х | Х |  |
|   | Emergency managers and first responders   | $\checkmark$ | $\checkmark$ | Х | Х |  |
|   | Elected officials   | $\checkmark$ | $\checkmark$ | Х | Х |  |
|   | Municipal budget personnel  | $\checkmark$ | $\checkmark$ | х | x | Publicly available but maybe not explicitly shared |
|   | Chamber of commerce/business community  | $\checkmark$ | $\checkmark$ | х | х | Publicly available but maybe not explicitly shared |
|   | Municipal commissions   | $\checkmark$ | $\checkmark$ | х | x | Publicly available but maybe not explicitly shared |
|   | Community members   | $\checkmark$ | $\checkmark$ | Х | Х |  |
|   | Regional Planning Organization  | $\checkmark$ | $\checkmark$ | Х | Х | MCOG?  |
|   | State programs and agencies (MPAP, MFMP, MGS, MEMA)   | $\checkmark$ | $\checkmark$ | Х | Х | On their websites                                  |

| <ul> <li>(a) Are coastal storm and flood hazard frequencies<br/>and durations established for your community and</li> <li>(b) has your community determined what an<br/>acceptable level of risk is with respect to those<br/>hazards?</li> </ul> | X | x | $\checkmark$ | ~ |                                       |
|---|---|---|--------------|---|---------------------------------------|
| Does your community have working relationships<br>with technical resources such as government<br>programs, universities, or professionals that provide<br>assistance with flood hazards, risk, vulnerability, and<br>resiliency?                  | ` | 1 | >            | < | GMRI / GEI / WP / FEMA / GOPIF / MDOT |

|   | Critical Infrastructure and Facilities   | Y            | es           | N            | 0            | N/A | Notes   |
|---|--|--------------|--------------|--------------|--------------|-----|---|
| 1 | Does your community have a detailed inventory,<br>including elevations, of the following critical facilities<br>and infrastructure that includes information about<br>the location of assets in relation to (a) existing and<br>(b) potential future flood hazard areas? | а            | b            | а            | b            |     |   |
|   | Stormwater system  | Х            | Х            | $\checkmark$ | $\checkmark$ |     |   |
|   | Water treatment and transport system (plant, pipes, and pump stations) and drinking water wells  | $\checkmark$ | $\checkmark$ | х            | X            |     | Pump stations   |
|   | Power grid (substations)   | $\checkmark$ | $\checkmark$ | Х            | Х            |     | VA  |
|   | Energy network (oil, natural gas, etc.)  | Х            | Х            | $\checkmark$ | $\checkmark$ |     |   |
|   | Public roads   | $\checkmark$ | $\checkmark$ | Х            | Х            |     | VA  |
|   | Evacuation routes  | Х            | Х            | $\checkmark$ | $\checkmark$ |     |   |
|   | Culverts   | X            | Х            | $\checkmark$ | $\checkmark$ |     |   |
|   | Bridges  | $\checkmark$ | $\checkmark$ | Х            | Х            |     | VA  |
|   | Dams   | Х            | Х            | $\checkmark$ | $\checkmark$ |     |   |
|   | Piers or wharfs  | $\checkmark$ | $\checkmark$ | х            | Х            |     | VA  |
|   | Railway infrastructure   | $\checkmark$ | $\checkmark$ | Х            | Х            |     | MDOT does track this information.   |
|   | Town/City hall   | $\checkmark$ | $\checkmark$ | Х            | х            |     | VA  |
|   | Critical record storage building(s)  | X            | Х            | ~            | ~            |     | Each individual department is responsible<br>to maintaining a log of their records and<br>locations if stored off-site. |
|   | Police stations  | $\checkmark$ | $\checkmark$ | Х            | Х            |     | VA  |

|   | Fire station(s)   | $\checkmark$ | $\checkmark$ | Х            | Х            | VA  |
|---|---|--------------|--------------|--------------|--------------|---|
|   | Public works facilities   | $\checkmark$ | Х            | Х            | $\checkmark$ |   |
|   | Emergency operation center(s)   | Х            | Х            | $\checkmark$ | $\checkmark$ | This is listed in every local and county EOP.   |
|   | Communications office(s)  | $\checkmark$ | $\checkmark$ | Х            | x            | Sagadahoc County Dispatch is located at<br>752 High St, Bath ME 04530   |
|   | School(s)   | $\checkmark$ | $\checkmark$ | Х            | Х            | VA, unlikely to be affected   |
|   | Hospitals, urgent care facilities, and health centers<br>(e.g., nursing homes)                        | $\checkmark$ | $\checkmark$ | Х            | х            | VA, unlikely to be affected   |
|   | Emergency shelters  | X            | ×            | √            | ~            | No current shelters in Bath, however,<br>SCEMA does keep a list of locations used as<br>warming/cooling centers and places used<br>for shelters overnight if necessary. |
|   | Transportation centers (e.g., bus station, airport, etc,)   | Х            | Х            | $\checkmark$ | $\checkmark$ |   |
|   | Facility of regional or local significance (e.g., harbor, marina, commercial dock, etc.)              | X            | Х            | $\checkmark$ | $\checkmark$ | SCEMA does have access to this information  |
|   | Gas and diesel tanks at marinas/working waterfronts   | Х            | Х            | $\checkmark$ | $\checkmark$ | This would be a great project to know exactly where these may be located.   |
| 2 | Do the following critical infrastructure and facilities experience problems associated with flooding? |              |              |              |              |   |
|   | Wastewater treatment and transport system (plant, pipes, and pump stations)                           | ~            | /            | >            | (            |   |
|   | Stormwater system   | ~            | /            | >            | Х            |   |
|   | Water treatment and transport system (plant, pipes, and pump stations) and drinking water wells       | )            | <            | ~            | /            | Not to my knowledge.  |
|   | Power grid (substations)  | >            | <            | ~            | /            | Not to my knowledge.  |
|   | Energy network (oil, natural gas, etc,)   | >            | <            | v            | /            | Not to my knowledge.  |
|   | Public roads  | Ň            | /            | >            | <            |   |
|   | Evacuation routes   | >            | <            | ~            | /            | Official evacuation routes, not that I am aware of, but side streets may  |
|   | Culverts  | ~            | /            | >            | <            | Road commissioners should have this information.  |
|   | Bridges   | )            | <            | v            | /            |   |
|   | Dams  | >            | <            | ~            | /            | Not to my knowledge   |
|   | Piers or wharves  | >            | <            | v            | /            | Not to my knowledge   |

|    | Railway infrastructure  | >      | <            | V            | $\checkmark$ |  | Not to my knowledge   |
|----|---|--------|--------------|--------------|--------------|--|---|
|    | Facility of regional or local significance (e.g., harbor, marina, commercial dock, etc.)  | \<br>\ | $\checkmark$ |              | •            |  | Maritime Museum with the recent flooding incident. I am not aware of other locations      |
|    | Gas and diesel tanks at marinas/working waterfronts   | >      | <            | $\checkmark$ |              |  | Not to my knowledge   |
| 3  | (a) Are maps or GIS used to show the location and<br>accessibility of critical infrastructure and facilities in<br>relation to flood hazard areas and (b) is that<br>information publicly available?  | √      | √            | ×            | ×            |  | Room for expansion through mapping? ie:<br>story mapping/ interactive web mapping<br>etc. |
| 4  | Are there plans and backup systems in place for<br>critical infrastructure and facilities to ensure the<br>continuation of function and services during and<br>after flood hazard events?   | >      | <            | ~            | ,            |  | Include the water district in this conversation as well                                   |
| 5  | Has your community assessed or considered the<br>amount of time that would be needed to return<br>damaged infrastructure and facilities to a functional<br>condition post-hazard event?   | >      | X            |              | ,            |  | Not formally?   |
| 6  | (a) Do critical infrastructure and facilities'<br>maintenance plans and budgets account for<br>adaptation/mitigation actions and (b) post hazard<br>repairs and cleanup?  | √      | ~            | ~            | ~            |  | Need development for certain<br>infrastructure types (3/22 WP plan for<br>wastewater?)    |
| 7  | (a) Are maintenance, repair, and upgrade activities<br>and associated costs for infrastructure and facilities<br>documented and tracked? (b) Are costs associated<br>with flooding identified, documented, and tracked?   | Х      | √            | ~            | X            |  | Sometimes for FEMA-declared emergency events this information can be created              |
| 8  | Do capital improvement plans for critical<br>infrastructure and facilities consider (a) existing and<br>(b) potential future flood hazards?   | √      | √            | Х            | X            |  |   |
| 9  | Has your community discussed at what point it will<br>stop repairing and upgrading existing critical<br>infrastructure and facilities to withstand flooding?  | >      | <            | ~            | ,            |  | Need to address   |
| 10 | <ul> <li>(a) Do community plans include recommendations</li> <li>for abandonment, relocation, or</li> <li>adaptation/protection of critical infrastructure and</li> <li>facilities located in flood-hazard areas? (b) Have</li> <li>funding opportunities or mechanisms to implement</li> <li>those actions been identified?</li> </ul> | X      | ✓            | ~            | X            |  |   |
| 11 | Are critical infrastructure and facilities that are<br>located in flood hazard areas elevated or<br>floodproofed to at least the 0.2% chance (i.e., 500-<br>year) flood or 3 feet above the 1% chance (i.e., 100-<br>year) base flood elevation?  | )      | <            | ~            | ,            |  | Some are  |

| When planning new critical infrastructure and facilities, does your community consider existing and potential future impacts of the following coastal hazards? |              |   | VA |
|--|--------------|---|----|
| Coastal and nuisance flooding  | $\checkmark$ | Х |    |
| Strom surge  | $\checkmark$ | Х |    |
| Sea level rise   | $\checkmark$ | Х |    |
| Coastal erosion and/or shoreline change  | $\checkmark$ | Х |    |

|   | Community Planning  | Yes          | No           | N/A | Notes   |
|---|---|--------------|--------------|-----|---|
| 1 | Does your community have a shared vision of<br>'community resilience'?          | Х            | $\checkmark$ |     | Creating CAP updates to develop this shared vision  |
| 2 | Does your community have plans that address the following?                      |              |              |     | VA / broadly but not specific plans   |
|   | Coastal hazards   | X            | ~            |     | DPW has been developing site-specific<br>plans for certain infrastructurewe should<br>capture what plans exist for what types of<br>infrastructure as it relates to flooding. |
|   | - Coastal and nuisance flooding   | Х            | $\checkmark$ |     |   |
|   | - Strom surge   | Х            | $\checkmark$ |     |   |
|   | - Sea level rise  | Х            | $\checkmark$ |     |   |
|   | - Coastal erosion and/or shoreline change                                       | Х            | $\checkmark$ |     |   |
|   | Adaptation and mitigation strategies and actions addressing coastal hazards     | $\checkmark$ | Х            |     | Broadly   |
|   | Community resilience and specific strategies and actions to increase resilience | Х            | $\checkmark$ |     | In development  |
|   | Open space preservation and management  | $\checkmark$ | Х            |     | Comp Plan   |
|   | Beach management  | Х            | Х            | N/A |   |
|   | Floodplain management   | $\checkmark$ | Х            |     | FP Ordinance  |
| 3 | Does your community have the following personnel on staff or on retainer?       |              |              |     |   |
|   | Professional planner  | $\checkmark$ | Х            |     |   |
|   | Code enforcement officer  | $\checkmark$ | Х            |     |   |
|   | Certified Floodplain Manager (CFM)  | Х            | $\checkmark$ |     |   |
|   | Building Inspector  | $\checkmark$ | Х            |     |   |

|    | Engineer   |              | /            | >             | (            |   |                                      |
|----|--|--------------|--------------|---------------|--------------|---|--------------------------------------|
|    | Public works director  | 、<br>、       | /            | >             | (            |   |                                      |
|    | Plumbing inspector   | 、            | /            | Х             |              |   |                                      |
|    | Emergency manager  | `            | /            | Х             |              |   |                                      |
| 4  | Does your community's floodplain ordinance exceed minimum State standards?   | x            |              | Х             |              | 1 | Need to review                       |
| 5  | Does your community's floodplain ordinance apply<br>to flood hazard areas that extend (a) vertically and<br>(b) horizontally beyond those identified as the<br>Special Flood Hazard Area (SFHA) or 100-year<br>floodplain depicted on your community's Flood<br>Insurance Rate Map (FIRM)?   | x            | x            | Х             | X            | 1 | Need to review                       |
| 6  | Do your community's land use regulations limit<br>development in areas subject to (a) existing and (b)<br>potential future flood hazards?  | $\checkmark$ | $\checkmark$ | Х             | х            | F | Reviewing VA and shoreland currently |
| 7  | Does your community have policies that limit public<br>investment in areas vulnerable to (a) existing and (b)<br>potential future flood hazards'?  | х            | х            | $\checkmark$  | $\checkmark$ | F | FP ordinance?                        |
| 8  | Are frequently flooded areas in your community<br>zoned or planned for open space or prioritized for<br>acquisition or easements?  | x            |              | ~             | ·            | ł | KELT?                                |
| 9  | Has your community conducted a build-out analysis based on land use regulations?   | >            | <            | $\checkmark$  |              |   |                                      |
|    | Have the results been compared to the spatial extent of (a) existing and (b) potential future flood hazard areas?  | х            | х            | $\checkmark$  | $\checkmark$ |   |                                      |
| 10 | Do your community's land use regulations<br>encourage the use of green infrastructure<br>approaches for stormwater management?   |              | /            | $\overline{}$ | (            | ſ | Mentioned in the 2024 zoning update  |
| 11 | (a) Does your community offer economic incentives<br>(e.g., development fee waivers) for property owners<br>that willingly implement flood risk reduction<br>practices on their property (e.g., freeboard outside<br>of the regulatory floodplain, elevating structure<br>above minimum freeboard requirement, etc.)? (b) If<br>so, are the incentives advertised? | x            | x            | $\checkmark$  | ~            |   |                                      |
| 12 | Does your community have a comprehensive plan?   | ``           | /            | >             | (            |   |                                      |

|    | Does your community have a MEMA- and FEMA-<br>approved hazard mitigation plan that addresses<br>preparedness for (a) existing and (b) potential future<br>flood hazards?<br>Does the plan appear in the county hazard<br>mitigation plan?<br>Does your community have a hazard/disaster<br>education and outreach plan? | √ √<br>X<br>X | × × ×        | Sag County HMP<br>Sag county HMP  |
|----|---|---------------|--------------|---|
|    | Community plan  | Х             | $\checkmark$ |   |
|    | School plan   | Х             | $\checkmark$ | Not immediately obvious on RSU page   |
| 15 | Are clearly marked signs placed throughout your<br>community indicating the following and does your<br>community provide related information to residents<br>and businesses prior to a possible flood event?  |               |              | SCEMA keeps a list of people who wish to<br>be notified of major weather events<br>affecting SC. We will send out situation<br>reports to that list and provide a large social<br>media presence before, during and after<br>storms. Also the new mass notification<br>system that people can sign up for (RAVE)<br>allows residents to be prepared for flooding<br>events. |
|    | Evacuation routes   | 1             | X            | I would have to check on this, but I believe<br>that MDOT looks at the evacuation routes<br>and signs on major roads. We are currently<br>working on a project that would allow for<br>mobile signs to be deployed to areas during<br>flooding incidents.   |
|    | Evacuation pick-up locations  | $\checkmark$  | ×            | Bath YMCA is the current location in the<br>state plan should an evacuation be ordered<br>by the Governor. I am working with the<br>Bath YMCA to see if this information is still<br>correct.   |
|    | Shelter locations for people and for pets/farm animals  | Х             | ~            | Not yet.  |
| 16 | Are high water mark, storm surge, and/or potential future flood elevation signs posted in your community in publicly visible areas?   | х             | ~            | Has been discussed  |
| 17 | (a) Does your community participate in flood hazard<br>reduction programs (e.g., National Flood Insurance<br>Program (NFIP), FEMA's Community Rating System,<br>etc.)? (b) If so, is your community in good standing<br>with those programs?  | x x           | ✓ ✓          | Not participating according to the eligible communities list  |

| 18 | Is your community designated as Storm Ready by the National Weather Service?  | Х            | $\checkmark$ |   |
|----|---|--------------|--------------|---|
| 19 | Has your community adopted the most recent<br>Maine Uniform Building and Energy Code (MUBEC)?   | $\checkmark$ | Х            |   |
| 20 | Does your community have a local hazard disclosure<br>policy requiring hazard disclosure by real estate<br>agents, private sellers, and/or by municipal officials<br>for properties located in (a) the FEMA-designated<br>regulatory floodplain and/or (b) other flood hazard<br>areas (e.g., storm surge, sea level rise, etc.)? | √ √          | x x          | New Maine law   |
| 21 | Does your community have a disaster response and<br>recovery plan that includes short- and long-term<br>actions and policies and identifies personnel<br>responsible for those actions?   | X            | $\checkmark$ | Not Yet. Plan is in development in the near future.   |
| 22 | Does your community participate in practice drills of emergency response plans?   | $\checkmark$ | Х            | EMA is looking to start hosting at least 2 community drills a year.   |
| 23 | (a) Does your community have a flood warning plan<br>and (b) a flood warning system?  | X 🗸          | ✓ X          | No plan, but RAVE system automatically sends out flood warning information.   |
| 24 | Does your community have an emergency<br>communication system to use prior to, during, and<br>after a storm event or natural disaster (e.g., reverse<br>911 call system for landlines, IPAWS for cell<br>phones)?   | $\checkmark$ | ×            | Yes, City actually has access to the new<br>alerting platform to use as well. IPAWS<br>messages must go through SCEMA up to<br>MEMA to send out message.  |
| 25 | Does your community have an emergency<br>evacuation plan that identifies populations needing<br>evacuation assistance and mechanisms for providing<br>that assistance?  | Х            | ~            | New alerting system does take care of this<br>as long as people have entered this<br>information. SCEMA also does keep records<br>of locations such as group homes, nursing<br>care facilities, etc.  |
|    | Does the plan account for seasonal population variability?  | $\checkmark$ | Х            |   |
| 26 | Does your community have mutual aid agreements<br>with neighboring communities for hazards and<br>disaster preparation, response, and recovery?   | $\checkmark$ | Х            |   |
| 27 | Does your community have a plan for acquiring and<br>disseminating response and recovery equipment<br>and materials (generators, food, water, etc.)?  | $\checkmark$ | X            | If a community cannot satisfy this request<br>on their own, they must contact SCEMA<br>who will reach out to our surrounding<br>partners or mutual aid agreements. If those<br>requests cannot be filled, then SCEMA will<br>reach out to MEMA. |
| 28 | Does your community have a post-disaster waste<br>management and debris removal plan that has been<br>reviewed by MEDEP, MEMA, and FEMA?  | $\checkmark$ | Х            | Yes, but needs to be updated.   |

| 29 | Does your community budget for local disaster response and recovery funds (not from State or federal agencies)?   | Х | $\checkmark$ | No, but there is a contingency fund established  |
|----|---|---|--------------|--|
| 30 | Are mechanisms in place for your community to solicit and receive external funds for disaster response and recovery?  | X | ~            | Not yet, but this could be quickly done at the county office   |
| 32 | Does your community track storm/hazard recovery<br>and cleanup expenses?  | ~ | X            | This would all be done at the local level. If a<br>disaster is large enough then we would be<br>included for technical assistance, but the<br>responsibility is on the local agency to track<br>and report all disaster recovery expenses. I<br>am working on an accountability tool that<br>will make it much easier for each<br>community to track this information. |
|    | Does the tracking method comply with FEMA and<br>MEMA requirements for disaster recovery funding<br>programs (e.g., 2D Statement of Damages Road<br>Tracker form)?  | 1 | ×            | Done through the damage assessment<br>process, and site inspections by MEMA and<br>FEMA. All work must be documented and<br>accounted for in scoping calls and project<br>planning meetings.   |
|    | Does your community have a plan to address and<br>expedite permitting and inspection processes<br>associated with post-disaster repairs while ensuring<br>that reconstruction and redevelopment are resilient<br>and directed away from flood hazard areas? | Х | $\checkmark$ | This is usually done through a disaster<br>declaration process and getting the sign-off<br>from the Governors office. Since Maine has<br>not had many declared disasters, I do not<br>believe there is a formal plan in place, but I<br>will check with our recovery division<br>members to confirm.   |

|   | Social and Economic Vulnerability  |   | Yes |              | 0            | N/A | Notes   |
|---|--|---|-----|--------------|--------------|-----|---|
| 1 | Has your community identified and assessed the<br>following traditionally vulnerable populations<br>located in areas vulnerable to (a) existing and (b)<br>potential future flood hazards and considered them<br>in flood hazard risk, preparedness, and response<br>activities? | а | b   | а            | b            |     | Not explicitly in VA (According to the CDC<br>Social Vulnerability Index and US<br>Environmental Justice Screening, these<br>populations are not severely threatened,<br>though not flood risk specific); potential for<br>mapping of vulnerable populations to<br>overlay with SLR scenarios if data is<br>available |
|   | Elderly population   | Х | Х   | $\checkmark$ | $\checkmark$ |     |   |
|   | Households below the poverty level   | Х | Х   | $\checkmark$ | $\checkmark$ |     |   |
|   | Residents without vehicle access   | Х | Х   | $\checkmark$ | $\checkmark$ |     |   |
|   | Disabled individuals   | Х | Х   | $\checkmark$ | $\checkmark$ |     |   |

|   | Non-native English speakers   | Х            | Х            | $\checkmark$ | $\checkmark$ |  |
|---|---|--------------|--------------|--------------|--------------|--|
|   | Service industry/tourism-based workers  | Х            | Х            | $\checkmark$ | $\checkmark$ |  |
|   | Homeless population   | Х            | Х            | $\checkmark$ | $\checkmark$ |  |
|   | Working waterfront workers  | Х            | Х            | $\checkmark$ | $\checkmark$ | Applicable?  |
|   | Other local vulnerable population   | х            | х            | $\checkmark$ | $\checkmark$ | More information is needed on general<br>equity issues/vulnerable populations in the<br>city   |
| 2 | Has your community determined total property value within areas subject to (a) existing and (b) potential future flood hazards?   | x            | x            | $\checkmark$ | <            | Past plan needs updating, The Nature<br>Conservancy has an informative map that<br>gives rough estimates about inaccessible<br>houses and economic damage  |
| 3 | Has your community assessed the financial impacts<br>and subsequent impacts to the tax base of (a)<br>existing and (b) potential future flood hazards to the<br>following?                          | а            | b            | а            | b            | Past plan needs updating, VA does not<br>cover financial ramifications, not in comp<br>plan either; other towns had this done by a<br>consulting firm (rbouvier) in conjunction<br>with flood resiliency checklist |
|   | Infrastructure  | Х            | Х            | $\checkmark$ | $\checkmark$ |  |
|   | Facilities  | Х            | Х            | $\checkmark$ | $\checkmark$ |  |
|   | Public property   | Х            | Х            | $\checkmark$ | $\checkmark$ |  |
|   | Commercial private property   | Х            | Х            | $\checkmark$ | $\checkmark$ |  |
|   | Residential private property  | Х            | Х            | $\checkmark$ | $\checkmark$ |  |
| 4 | Has your community assessed the level of flood insurance coverage in flood hazard areas?  | )            | <            | $\checkmark$ |              |  |
| 5 | a) Has your community assessed trends in the<br>relative size and age of the permanent resident<br>population and seasonal visiting population and (b)<br>predicted future trends and impacts?      | $\checkmark$ | $\checkmark$ | х            | X            |  |
| 6 | Does your community conduct education and<br>outreach to ensure community members and<br>businesses are aware of hazard risks, warning<br>procedures, and evacuations plans?                        | >            | <            | ~            | /            | Briefly mentioned in the comp plan,<br>housing study?  |
| 7 | Are education and outreach materials prepared in the major languages spoken by residents and visitors?  | >            | <            | ``           | 1            | We have some materials that are translated<br>for residents who do not speak English.<br>Information would be limited.   |
|   | Is there strong participation among residents in<br>social networks and citizen organizations (e.g.,<br>volunteer organizations, faith-based organizations,<br>and civic groups) in your community? | ``           | /            | )            | <            |  |

| 8  | Is your community served by an active Community<br>Emergency Response Team (CERT)?   | Х            | х | $\checkmark$ | $\checkmark$ | N  | ot yet                                |
|----|--|--------------|---|--------------|--------------|----|---------------------------------------|
| 9  | Has your community analyzed commuting patterns<br>to identify the extent to which the local economy is<br>dependent on the workforce raveling into and out of<br>your community and how (a) existing and (b)<br>potential future flood hazards could impact that<br>transport? | √            | ~ | X            | X            | Cc | omp plan from a vulnerability lens?   |
| 10 | Has your community identified strategies for<br>protecting or relocating culturally or historically<br>significant artifacts/structures located in (a) existing<br>and/or (b) potential future flood hazard areas?   | х            | х | $\checkmark$ | $\checkmark$ |    |                                       |
| 11 | Is the economic base of your community diversified beyond tourism, maritime industries, and fisheries?   | $\checkmark$ |   | ×            | (            | Cc | omp plan data                         |
| 12 | Does your community encourage businesses located<br>in flood hazard areas to prepare continuity of<br>operations plans?  | X            |   | $\checkmark$ |              |    |                                       |
| 13 | Does your community encourage businesses located in flood-hazard areas to purchase flood insurance?  | >            | < | V            | /            |    |                                       |
| 14 | Does your community have business-supported<br>groups (e.g., Chamber of Commerce) that assist local<br>businesses with assessing vulnerability, flood hazard<br>preparation, and hazard mitigation and adaptation?   | ✓            |   | X            | <            | м  | lain street bath, chamber of commerce |
| 15 | Does your community encourage local businesses to register as approved vendors for federal post-<br>disaster procurement processes?  | >            | < | ~            | /            |    |                                       |
| 16 | Does your community have an economic<br>development plan or strategy that addresses (a)<br>existing and/or (b) potential future flood hazards?   | Х            | Х | $\checkmark$ | Х            | No | ot specifically?                      |

|   | Natural Environment   |              | Yes          |   | 0 | N/A | Notes     |
|---|---|--------------|--------------|---|---|-----|-----------|
| - | (a) Are the following natural resource areas within<br>your community identified and mapped and (b) has<br>your community conserved or developed a plan to<br>conserve or restore them? | а            | b            | а | b |     |           |
|   | Dunes and beaches   | Х            | Х            | Х | Х | N/A |           |
|   | Wetlands  | $\checkmark$ | $\checkmark$ | Х | Х |     | NWI       |
|   | Coastal and wetland buffers and adjacent uplands  | $\checkmark$ | $\checkmark$ | Х | Х |     | NWI / BWH |
|   | Natural areas of significance   | $\checkmark$ | $\checkmark$ | Х | Х |     | BWH       |

|   | Coastal Barrier Resources System (CBRS)  | Х  | Х            | Х            | Х            | N/A | According to national maps  |
|---|--|----|--------------|--------------|--------------|-----|---|
| 2 | Are potential conservation efforts, easements, and<br>land acquisitions assessed for (a) existing and (b)<br>potential future flood impacts and long-term ability<br>to provide beneficial functions?                          | x  | x            | $\checkmark$ | $\checkmark$ |     | No explicit mention in the 2023 comp plan<br>or KELT conservation documents |
| 3 | Does your community prioritize repetitive loss<br>properties for acquisition and conversion to open<br>space?  | ;  | X            | `            | /            |     | Doesn't seem like it  |
| 4 | Does your community have local ordinances to<br>protect the following from development or<br>disturbance that are more protective than State<br>regulations?   |    |              |              |              |     | Mostly seems to abide by the state's requirements                           |
|   | Dunes and beaches  | )  | X            | )            | (            | N/A | Shoreland Zone / NRPO   |
|   | Wetlands   | ,  | /            | >            | <            |     | Shoreland Zone / NRPO   |
|   | Coastal and wetland buffers  | `` | $\checkmark$ |              | <            |     | Shoreland Zone / NRPO   |
|   | Bluffs   | ;  | Х            |              | /            |     | Shoreland Zone / NRPO   |
|   | Flood hazard areas   | Х  |              | `            | /            |     | Shoreland Zone / NRPO   |
|   | Erosion hazard areas   | Х  |              | $\checkmark$ |              |     | Shoreland Zone / NRPO   |
|   | Natural areas of significance  | ;  | Х            |              | /            |     | Shoreland Zone / NRPO   |
|   | Coastal Barrier Resources System (CBRS)  | ;  | X            | $\checkmark$ |              |     | Shoreland Zone / NRPO   |
| 5 | Has potential future marsh migration been analyzed,<br>considered, and addressed in your community's<br>planning and land use decisions?   | ;  | x            | ~            | /            |     | Identified but not analyzed or put into COC?                                |
| 6 | Has your community assessed impacts (e.g.,<br>saltwater intrusion) of (a) existing and (b) potential<br>future flood hazards and sea level rise to public and<br>private drinking water supplies?                              | x  | x            | $\checkmark$ | $\checkmark$ |     |   |
|   | Is there a plan in place to protect supplies?  | Х  | Х            | $\checkmark$ | $\checkmark$ |     |   |
| 7 | Does your community have a plan and process in<br>place to ensure septic systems located in<br>environmentally sensitive and flood hazard areas are<br>routinely inspected and functioning properly?                           | 2  | x            |              | /            |     |   |
| 8 | Does your community prohibit, or allow with more<br>stringent environmental restrictions, septic systems<br>in flood hazard and coastal areas or encourage<br>adaptation practices to protect from storm and<br>flood impacts? | 2  | Х            |              | /            |     |   |

| 9  | (a) Are the following sites located within flood<br>hazard areas in your community? (b) If so, are there<br>plans and policies in place to mitigate flood hazard<br>impacts and protect human and environmental<br>health? | а            | b            | а            | b |  |
|----|--|--------------|--------------|--------------|---|--|
|    | Brownfields  | $\checkmark$ | $\checkmark$ | Х            | Х |  |
|    | Superfund sites  | Х            | Х            | $\checkmark$ | Х |  |
|    | Landfills  | Х            | Х            | $\checkmark$ | Х |  |
|    | Tailings ponds and mining waste sites  | Х            | Х            | $\checkmark$ | Х |  |
| 10 | Are environmental protection measures, strategies,<br>and priorities integrated in your community's<br>comprehensive and hazard mitigation plans?  | ~            | /            | ,            | < |  |
| 11 | Do your community's post-storm recovery plans<br>ensure protection of environmentally sensitive or<br>significant areas (e.g., dune systems)?  | >            | <            | ``           | 1 |  |