

To:	<u>ResilientMass Metrics Project Management Team</u>	Date:	January 28, 2025
From:	<u>Susanne Moser Research and Consulting on behalf of ResilientMass Metrics Consultant Team</u>	Proj. No.	0100583.00
Re:	<u>ResilientMass Metrics Prioritization Criteria and Process</u>		

cc:

Background and Timeline

The early phases of developing a set of resilience metrics for the Commonwealth of Massachusetts yielded nearly 200 metrics across all sectors considered. While this set of possible metrics is quite large, the collective picture emerging from them helps to adequately assess adaptation progress and success across the state. Initially, there were 8 sectors (Health, Economy, Infrastructure, Housing, Food & Water Security, Government Systems & Services, Natural Environment, and Environmental Justice, Equity and Collaboration). Infrastructure and Housing were eventually combined into one sector, resulting in 7 sectors overall, or an average of 28 metrics per sector. In reality, however, the number of metrics were distributed quite unevenly across sectors due to the varying number of subsystems considered in each sector.

Initial Prioritization Criteria

This initial set consisted of metrics that varied by a number of key prioritization criteria:

- *metric types* (many were focused on adaptive capacity and inputs; some on implementation actions or outputs; and a smaller number on outcomes);
- *specificity* (some related to specific state programs while others captured statewide conditions);
- *immediacy* (some were relevant to the current work of MA state agencies while others were beyond the current scope of work, but likely to be pursued in the future);
- *equity* (some allowed to get both an integrated, statewide picture of the state of resilience as well as demographically or geographically differentiated picture to assess equitable resilience); and
- *data availability* (some metrics could be measured with available data, others not yet).

The Project Management Team (PMT) and consultant team worked to refine this list into a smaller set of priority metrics that focus on high-priority issues, are implementable and actionable over time, and help illustrate the scope and scale of state-led efforts across sectors.

Consistent with the transparent, and stakeholder-intensive metrics development process up to that point, it was important to make this prioritization process equally transparent and open for input. The consultant team submitted an initial proposal for prioritizing resilience metrics for near-term tracking to the PMT for consideration in August 2024. The consultant team sought agreement with the need for prioritization and refined the prioritization criteria through input from the PMT, the Equity Advisory Group (EAG), state agencies, the public, and through the process of applying the initial criteria. This refinement process and the prioritization process itself took place through the end of October 2024, integrating feedback gathered from all stakeholders via four separate virtual meetings (one per group). At that time, the initial set of metrics (for inclusion in the Climate Report Card for 2024) was due. A second set of metrics for near-term benchmarking (a deliverable of this project) was finalized soon thereafter. For the Report Card and Near-term Priority metrics, the consultant team designed a flexible

graphic display (e.g., dashboard) (due by the end of the project). The remainder of the metrics were categorized, characterized, and submitted for future development and tracking as part of the Implementation Recommendations submitted to the PMT in December 2024.

Refined Prioritization Criteria

the refinement of the prioritization criteria was based on several key inputs: (1) Prioritization-related resources and insights gained from practical experience during the development of the metrics resource site - www.resiliencemetrics.org; (2) The Massachusetts Climate Impacts Assessment (urgency score); (3) RMA's Climate Resilience Design Standards & Guidance (criticality assessment); (4) Principles guiding Massachusetts' state climate actions, put forth in the Climate Chief's first climate report, issued in 2023; and (5) Consultant team discussions, i.e., expert opinion.

During the stakeholder input sessions, we laid out the rationale for prioritization and introduced the proposed criteria. This led to the refinement of the phrasing of one of the criteria (the shorthand **"equity"** was spelled out more clearly as **"ability to disaggregate"**). While stakeholder input did not surface any concrete additional criteria, i.e., they seemed satisfied with the approach, the narrative input of meeting participants illustrated and clarified possible needs and uses of metrics by different user groups, which supported the rating process.

The final set of prioritization criteria, along with their definition and useful assessment questions and standardized ratings is given in the Table below.

Resulting Metrics Groupings

- **ResilientMass priority metrics:**

Metrics that are already or will be developed and tracked annually, including:

- **Metrics "currently being tracked."** These consist mostly of metrics which already have data readily available and ranked high on the prioritization criteria. These metrics will be reported on the upcoming ResilientMass Metrics dashboard. A subset is also being reported in the annual Climate Report Card.

- **Metrics "prioritized for development."** These consist of metrics that were identified and prioritized by stakeholders as important metrics to develop and begin tracking as soon as possible, within the current five-year ResilientMass Plan cycle.

- **Metrics for further consideration:**

By far the largest grouping of metrics, this set includes the remaining metrics that have been identified and reviewed through the initial Metrics development process. These metrics did not rank as highly on the prioritization criteria for a variety of reasons such as the need for gathering data from private sector entities, the need for more research into a topic, or that the metric may be most useful at the state agency level but not necessarily relevant for a statewide, public audience.

Metrics Refinement Process

During the process of baselining the 2024 Climate Report Card and the *metrics currently being tracked*, the actual metrics underwent further refinement. Through intensive work with state agencies who collect the underlying data, the metrics needed to be further, and in some instances more narrowly,

defined for now (e.g., where data were not available for an entire sector but for a program). Future work may refine or expand the metrics definitions in these instances, as data from multiple agencies can be combined.

Conclusion

Prioritization enabled metrics groupings that point to near-term and medium-term areas for development, and longer-term considerations for statewide metrics and for agency-specific and other types of metrics. Those not currently baselined and displayed in the dashboard can be further considered through the ResilientMass Plan process and shared with stakeholders and partners for their consideration in developing and tracking relevant metrics as well.

The Implementation Recommendations detail this future work, and emphasize that the metrics framework for the state should be fairly stable, while individual metrics may change over time. This flexible approach accommodates the integration of metrics yet-to-be developed, but also the need for new metrics not yet considered, as climate change demands attention to new challenges, thus pointing to needed shifts in adaptation strategies.

To ensure the Metrics Framework meets the needs of users, periodic evaluation of the framework and the metrics development, refinement, and use processes is highly recommended.

Criteria	Definition	Diagnostic Question	Assessment
Scientific validity	The metric constitutes a meaningful representation of the indicator	Does the potential way of measuring/ tracking the indicator measure what is intended, get at the indicator?	Ranking (1 – not very well; 2 – yes, but needs improvement; 3 – yes, strong as is)
Aversion of High-Priority Impacts	The metric relates to adaptation that minimizes or averts a high-priority climate impact (urgency score) or a critical built asset (criticality)	To what extent does this metric address a high-priority (or urgent) impact (urgency is a function of expected magnitude of impact, disproportionality of exposure & adaptation gap)? For physical/built assets, what is its criticality?	Ranking of risk/impact in terms of impact on human lives, the natural environment, or \$ of potential damage (range: 1-3); human lives will be considered more important than econ. damages (see also Sector Balance)
Ability to disaggregate	The metric allows for the assessment of socially and regionally differential progress or success of adaptation	Is the data that measures the metric able to be analyzed and displayed in ways that enable viewers to glean information on environmental justice and priority populations	Ranking (1 – no; 2 – yes, with modification; 3 – yes)
Decision relevance / Uses by different audiences	The metric conveys information that is needed for critical decision-making	Is the information conveyed by this metric likely to be used in state policy-making and agency decisions (e.g., funding allocation)	Ranking (1 – low relevance, ancillary; 2 – relevant; 3 – highest relevance)
Multi-solving	The metrics is relevant to multiple actors, sectors and actions that address several problems at once	Does the metric relate to an issue where (adaptation) action solves or reduces multiple problems at once?	Ranking (1 – no, single-sector/issue solution; 2 – yes, two-sector/issue solution; 3 – yes, benefits to multiple sectors/issues)
Data Availability/ Capacity to Track	The metric can be tracked/measured, now or in the future	Do state agencies or external partners have the capacity to track the necessary data, currently/in the future?	Ranking (1 – not currently from state or partner; 2 – yes, in the near future from state or partner; 3 – yes, available)
Sectoral Balance	The totality of metrics covers all priority sectors outlined in the Framework	Are all priority sectors in the Framework represented? Are both, natural and human-system concerns represented?	Final readjustment: fill sectoral gaps, reduce over-representation or redundancy (if any)