ResilientCoasts Final Plan

Response to Comments/Questions

Summary:

The ResilientCoasts Draft Plan was released for public review and comment in May 2025. Over a one-month comment period, the state received nearly 50 public comment letters with feedback and questions on the draft plan. Between June and August 2025, the state thoroughly reviewed all comment letters and made several revisions to the draft plan in accordance with feedback.

Below is a summary of key themes from the comments and questions received and an explanation of whether or how this feedback was addressed in the final plan. Much of the feedback we received was about implementation and next steps of the ResilientCoasts Initiative. While this feedback has been noted and will be taken into consideration in the implementation phase, it did not require revisions to the plan content itself.

- **How were the seven coastal typologies chosen and why don't they include additional coastal ecosystems like eel grass, mud flats, etc.?**
  The seven coastal typologies represented in the plan (e.g., salt marshes, barrier beaches, coastal banks, coastal beaches/dunes, coastal and tidal river floodplains, and ports and working waterfronts) are not an exhaustive list of Massachusetts coastal environments. The plan is focused on a subset of major coastal typologies that are primarily along the immediate shoreline and within the floodplain, where the highest risks for coastal hazards coincide with vulnerable development. These are also the coastal environments most relevant for the subset of resilience measures that are identified and discussed in Chapter 7. While other coastal environments, including critical habitat in the intertidal to subtidal zone, have resilience benefits and vulnerabilities, they are beyond the scope of this plan and will be examined more closely in future phases of ResilientCoasts or through other state initiatives.

- **Why aren't urban waterfronts called out as an area in need of their own specific strategy?**
  Urban waterfronts often align with coastal floodplains and ports and working waterfronts typologies. The plan recognizes that there are variations within the seven coastal typologies, like density of people and development, that are important for communities to consider in assessing vulnerability and devising a resilience approach. Because of the

complexity of defining and addressing these variations on a coastwide basis, the coastal typologies were not further subdivided. The state recognizes the importance of developing tailored guidance and approaches for some of these unique coastal areas and will continue to iterate and refine these coastal typologies in the future.

- **Designated Port Areas (DPAs) should be shown as a coastal typology on the maps for the Coastal Resilience Districts.**
  DPAs are included in the ports and working waterfronts coastal typology. Since this typology often overlaps with others and the state does not have a ports and working waterfronts data layer, the plan has been updated to include DPAs as an overlay on the coastal typology maps to represent a subset of ports and working waterfronts in the Coastal Resilience Districts.

- **Why does the plan use information about "Community Types" from the Metropolitan Area Planning Council (MAPC) when that information is based on an outdated 2008 report and uses data from 2000?**
  While MAPC's Community Types were initially released in 2008, they were recently updated so that the underlying data is current to 2023/2024 and some municipalities have been recategorized where they have become major outliers in their subgroup. This dataset continues to be the best available source of comprehensive and consistent community characterization statewide.

- **The Coastal Resilience Districts should be empowered to make regulations and undertake projects as regional authorities.**
  At this stage, the Coastal Resilience Districts are advisory, not regulatory. In the implementation phase, the state aims to work with communities to facilitate district-scale convening and collaboration to undertake more district-scale prioritization and build a pipeline of projects with outsized regional impact. In piloting this work, the state hopes to surface any existing barriers or challenges to district-scale coordination and work with communities to identify and pilot solutions.

- **Why did you choose to use the 0.1% annual chance event for 2070 in your long-term planning rather than the 1% annual chance event?**
  The effective 0.1% annual chance flood extent for 2070 represents a very extreme event and includes areas with an annual chance flood extent greater than zero (0.1% when rounded up to the nearest tenth percent). This more extreme event was selected over the 1% probability for assessing long-term vulnerability to account for protection of life

safety and critical infrastructure.

- **The plan should acknowledge the value of natural ecosystems and nature-based projects—including ecosystem service value—to the economy and better account for these when discussing what is at risk from coastal hazards.**
  The plan has been updated to more clearly acknowledge the inherent value of natural ecosystems and nature-based projects to the economy and the risks posed to these assets by climate change.

- **Salt marsh restoration more generally (rather than fringing salt marsh restoration specifically) should be called out as its own coastal resilience measure.**
  The ResilientCoasts Plan is focused on the interface of coastal resources and development and the suite of resilience measures described in Chapter 7 were selected with that in mind. Fringing salt marsh restoration is an important technique for providing infrastructure protection, habitat, and other co-benefits where formerly existing or currently degraded fringing marsh fronts infrastructure. Given this narrower focus, salt marsh restoration, which could include restoration for ecosystem function goals beyond protection of infrastructure and buildings or facilities, is not covered in depth in the plan, though several techniques are referenced within. Given the critical habitat functions and vulnerability of salt marshes, multiple state initiatives are currently focused on advancing salt marsh restoration across the Commonwealth that are more broadly applicable. ResilientCoasts is coordinating with these other initiatives, including MassWildlife's Biodiversity Initiative and the Executive Office of Energy and Environmental Affairs Resilient Lands Initiative.

- **The plan should acknowledge the role that working waterfronts can play in resilience and storm response.**
  The plan has been updated to more clearly acknowledge the role that working waterfronts can play in resilience and storm response, for example, using boat landings as launch points for emergency rescue operations during extreme weather events.

- **The plan should focus more on emergency management and storm response.**
  Emergency management and storm response are highly important components of overall coastal resilience. While the plan incorporates some analysis and proposed actions related to near-term response to storms, the focus of ResilientCoasts is primarily to address near- and long-term shifts in coastal landscapes due to climate change and effective, cost-efficient coastal management strategies. This level of planning, while related, is typically

longer range and more forward looking. The Massachusetts Emergency Management Agency (MEMA) continues to be the lead for the Commonwealth on storm response. ResilientCoasts will coordinate closely with MEMA and other relevant agencies on actions in the plan related to emergency management as well as updates to the ResilientMass Plan, which addresses response and recovery from natural hazard events.

- **The plan should address consideration of cultural resources and Indigenous knowledge in the plan, including the importance of partnering with tribes.**
  The plan has been updated to more clearly acknowledge the importance of cultural resources and the value of Indigenous knowledge, including a commitment to expand engagement with tribes in the implementation of ResilientCoasts.

- **The underlying ResilientCoasts GIS layers and underlying data should be made publicly available for viewing and download.**
  The Near-Term Adaptation Areas and Coastal Resilience Districts will be made available via the Massachusetts Ocean Resource Information System (MORIS) following the release of the final plan. The Massachusetts Office of Coastal Zone Management (CZM) will also be launching an interactive web viewer in 2026 that will host these and other relevant ResilientCoasts data layers and other information.

- **The Near-Term Adaptation Areas do not look like I would expect for my community. Did you use local data sources to inform the analysis?**
  While many communities have performed vulnerability assessments at the local level and identified municipal priorities, this statewide analysis was conducted relative to the entire Massachusetts coastline. As a result, some communities may find that local areas of vulnerability/priority do not appear as prominently on the coastwide map. This reflects the relative range of risk across all coastal communities. In addition, there are two data constraints that may lead to different results than what is observed locally. First, the analysis is constrained by the need to use data that is available consistently and comprehensively across the coast. While some communities may have more detailed local data for one or more of the sectors, we are unable to use this data if it is not available in other communities. This is necessary to avoid unfairly biasing the analysis toward communities with greater capacity to have better local data. Second, the analysis focuses on coastal flood risk based on the Massachusetts Coast Flood Risk Model (MC-FRM). In some communities, observed flooding and known areas of flood vulnerability may be influenced by other drivers of flooding including extreme precipitation and stormwater. These drivers of flooding are not included in the analysis. The Near-Term

Adaptation Areas are not intended to replace local vulnerability assessments or priorities. They provide an additional lens of coastal risk – namely how coastal flood risk varies coastwide across communities and intersects with high relative concentrations of people, housing, built infrastructure, and economic resources. Communities can use this information in addition to local data to inform their coastal resilience planning and implementation efforts. The state looks forward to ongoing communication with coastal communities about the Near-Term Adaptation Areas including future refinements in the approach to updating them.

- **Why weren't natural resources included in the Near-Term Adaptation Areas analysis and will you be conducting a similar analysis for these resource areas?**
  Natural resources were excluded from this initial analysis for several reasons. First, we do not have readily available statewide data on natural resource systems that is of the same type or scale as for people/built infrastructure/economic resources (e.g., available via comprehensive coastwide datasets that can be analyzed at a discrete planning unit like a Census Block Group). Second, we do not have a vetted methodology for prioritizing natural resources based on their vulnerability to sea level rise and coastal storms. Whereas we were able to focus on concentration of direct harm to people/built infrastructure/economic resources for this initial analysis, prioritizing interventions for natural resource systems is more nuanced and requires a separate thoughtful engagement process with partners. Finally, natural resource systems likely require a different methodology for assessing risk and priority using longer-term scenarios than what was used in the Near-Term Adaptation Area analysis because the impacts of sea level rise and coastal storms on these areas often results in cascading changes that are not always as immediate compared to, for example, direct inundation of housing or infrastructure. Therefore, predicted risks to natural resources are more appropriately quantified on a longer time scale.

- **Why do the Near-Term Adaptation Areas focus on coastal flood risk and not erosion?**
  At this time, the state does not have a data layer that depicts erosion hazards in the 2030s and therefore erosion could not be incorporated into this analysis. The state seeks to develop erosion forecasts so projected risk of erosion can be incorporated into future iterations of the analysis. Please see Appendix V of the plan for more information on beach vulnerability.

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- **The state should adopt a hierarchy of prioritized resilience measures/solutions, which should be reflected in the plan.**
  Because resilience is not a one-size-fits-all approach and suitable interventions can vary greatly depending on the coastal environment and site conditions, the state is unable to adopt one hierarchy of prioritized measures that would be universally applicable across all communities and sites. The plan notes that – where feasible and effective – nature-based solutions and green infrastructure are preferred to grey infrastructure and hard-engineered solutions.

- **Why aren't living shorelines included as a resilience measure in Chapter 7?**
  While "living shorelines" is not in and of itself identified as a resilience measure in Chapter 7, several of the measures that are described in the chapter are types of living shoreline projects. Living shorelines are not a monolith – the term encompasses many different approaches/measures including those identified in the plan (cobble berms, restoration of fringing salt marsh, bank stabilization, and beach and dune nourishment). The plan has been updated to make this clearer.

- **The plan should provide further clarification on what is required or prohibited by the Federal Emergency Management Agency (FEMA) with regard to dry and wet floodproofing measures.**
  The wet and dry floodproofing measures in Chapter 7 have been updated to provide more clarity about what is required or prohibited by FEMA floodplain management standards and the State Building Code.

- **When discussing roadway elevation as a resilience measure, the plan should acknowledge that other than emergency routes, there are many locations where roadways can safely flood periodically and allowing these areas to flood can be part of a local resilience strategy.**
  This is an important nuance that was not addressed in the draft plan. The roadway elevation measure in Chapter 7 has been updated to acknowledge that, in some cases, allowing roadways to flood periodically (like during a projected 1% annual chance event) may be an appropriate and cost-effective resilience strategy if that road is not a critical route and is not subject to chronic inundation that undermines the infrastructure or consistently impacts road access. Along these same lines, the measure has been updated to clarify that planning and design of road projects should always include a comprehensive vulnerability assessment of the project area for current and future coastal

hazards and reflect community goals and needs.

- **The chapter on next steps, including the implementation timeline graphic, should be made clearer and acknowledge how resilience projects will be supported in the meantime.**
  Chapter 9 has been updated to more clearly articulate next steps and the timeline for action, including a reconfiguration of the implementation timeline graphics that distinguishes between ongoing efforts and the implementation of proposed near-, medium-, and long-term state-led actions identified in Chapter 8.