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To: Coastal Commission staff and interested parties
From: Statewide Planning Unit, Coastal Commission
Date: Last updated March 2025

Re: Rationale for using the intermediate-high sea level rise scenario

The [Coastal Commission Sea Level Rise Policy Guidance](#) (2024) recommends that site-specific hazard reports for residential and commercial development include an analysis of the “intermediate-high” sea level rise (SLR) scenario. A common question that arises regarding the use of this scenario is:

The intermediate-high risk scenario sounds very unlikely as it assumes higher end future emissions and high warming and incorporates low confidence processes like rapid ice sheet melt. Why, then, does the Commission’s guidance recommend using it to inform planning for medium to high risk aversion contexts like for commercial and residential development?

The purpose of this memo is to respond to this common question. There are several components to the answer:

1. **Using this scenario is consistent with statewide guidance.** The recommendation to use the intermediate-high SLR scenario (along with the intermediate and high scenarios in other contexts) originally stems from the 2018 State Sea Level Rise Guidance, and it remains consistent with the recent [2024 update](#) to that document. The 2024 update, which was developed by the Ocean Protection Council in coordination with the Ocean Science Trust and a scientific task force, constitutes current best available science on sea level rise for the State of California. It provides guidance on sea level rise scenarios and adaptation planning for use by state agencies and local jurisdictions, establishing a consistent statewide approach.

Since its 2018 iteration, the OPC Guidance has referred to medium-high risk aversion situations as those that are less adaptive, have a longer lifespan, are more vulnerable, and would experience medium to high consequences as a result of underestimating sea level rise. Commercial and residential development are included in that category. The 2024 OPC Guidance states that projects in the medium-high risk aversion category “should be resilient to the intermediate-high [SLR] scenario, when feasible”. In other words, the combination of the relatively low adaptive capacity of homes and businesses and the high consequences that would occur if they were to flood make it appropriate to include a relatively high SLR projection within the range of possible future SLR amounts to be analyzed, even though it has lower likelihood of occurring.

The [Coastal Commission Sea Level Rise Policy Guidance](#) incorporated this risk aversion framework consistent with OPC guidance in 2018, and the adopted 2024 update continues this approach with the most up to date science. By applying this recommendation, the Coastal Commission is being consistent with guidance from the State and helping to ensure that local jurisdiction planning efforts are consistent as well.

2. **Using the intermediate-high scenario is a precautionary approach.** The Coastal Commission, in line with statewide guidance, generally advocates for a precautionary approach to sea level rise adaptation planning. This approach stems from the overall importance of keeping development safe from coastal hazards and protecting coastal resources, consistent with the Coastal Act. It also derives from the fact that the costs and consequences associated with inadvertently underestimating SLR hazards could be quite high. To rephrase, we should use a relatively high scenario even though it has lower probability because of the high consequences to precious coastal resources, valuable development, and life and safety that would occur if we underestimate future SLR.

Guiding Principle #4 in the Coastal Commission Sea Level Rise Policy Guidance states, “Use a precautionary approach by analyzing, planning, and providing adaptive capacity for the higher end of the range of possible sea level rise.” This and the other Guiding Principles have been adopted by the Commission since 2015. Using the intermediate-high scenario is consistent with this principle.

3. **Evaluating this SLR scenario does not necessarily mean a project must be *designed* for it.** It is important to remember that *evaluating* the intermediate-high scenario does not necessarily mean that a project must be *sited and designed* to completely avoid hazards associated with that exact amount of sea level rise. As described in the Commission’s SLR Policy Guidance, “...there are a variety of interrelated factors that affect decisions regarding project design...that may support or necessitate initially designing for lower sea level rise amounts and incorporating requirements to adapt in some manner if higher, but less likely, sea level rise scenarios come to pass.” These factors include things like potential coastal resources impacts, site constraints, interconnected systems or infrastructure, and cost and engineering feasibility.

In other words, it may be appropriate to *design* for a lower amount of SLR but ensure there is a *plan* in place to respond to the intermediate-high SLR scenario if it comes to pass. In line with this recommendation, it is common for Coastal Commission decisions to include reasonable siting and design requirements to minimize risks from hazards as much as is feasible, and also require, typically through special conditions and deed restrictions, the applicant to assume the risk of developing in an area that could be impacted by sea level rise and agree to triggers for removal of the development, or other types of adaptation options.

Please consult the Coastal Commission’s [Sea Level Rise Policy Guidance](#) for additional information about addressing SLR in Coastal Commission planning and regulatory actions.