

# San Francisco's Approach to Sea Level Rise Planning and Science

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We live in the information age and the rate of increase in knowledge continues to accelerate. All types of data flows constantly before us and is available at our fingertips from numerous sources. Government officials struggle to stay up to date on the latest developments in science and technology, learn how to identify the most credible information, and know when to implement changes reflecting new knowledge. Planning for the effects of sea level rise is no exception.

Sea Level rise is a relatively new science discipline and scholars and institutions all over the world are gathering data, analysing trends, and advancing our collective projection skill. This research is essential to creating and maintaining resilience in coastal communities, and communicating this science to decision makers working on the ground to prepare our populations, property, and infrastructure is a critical task. The research and the communication, however, are two very different animals; one challenge in the chasm between these practices is identifying when and how new and important research that challenges the present understanding is ready for direct use in planning. In other words, when does cutting edge research become what is sometimes called "actionable science."

Coastal communities grappling with sea level rise must implement an internal system of checks and balances that monitors the latest reports and advances in science, institutes a timely process to verify the actionability of new information for the planning environment, and maintains a dynamic system to recommend and implement code changes reflective of this new information that optimizes investments in infrastructure, shorelines, and developments.

This presentation features two leaders of San Francisco's sea level rise planning. First, the City's former City Engineer, who now serves as the Mayor's Senior Policy Advisor on Sea Level Rise, will discuss the planning context in San Francisco, the City's Sea Level Rise Action Plan, its adopted guidance for considering SLR in capital planning, and related processes. This discussion will include the challenges associated with the urgent need for housing and development along San Francisco's Bay shoreline and the nexus with sea level rise. Second, the City's water and wastewater utility's Climate Program Director, who leads San Francisco's outreach to the science community, will discuss the City's approach to understanding the nature of the SLR threat, determining the best available science that informs assessment, and accommodating uncertainties in SLR projections. A key focus will be on the challenges associated with the rapidly changing projections now emerging from the climate science community (e.g. DeConto 2016; Oceans Melting Greenland data). This discussion will feature a perspective from one decision maker on how this new work is best framed and presented for coastal planning purposes.

**Keywords:** actionable science, decision maker, infrastructure, planning