Sea Level Rise Scenario Guidance

Marin County's Bay Waterfront Adaptation Vulnerability Evaluation (BayWAVE) is a focused vulnerability assessment of the bayside Marin shoreline's susceptibility to sea level rise (SLR) and increased storms. BayWAVE will evaluate the extent of impacted assets, assess the sensitivity and adaptability of selected assets and work with the local cities and towns to plan implementation of adaptation strategies. The Vulnerability Assessment will be complete in fall 2016.

To ensure SLR adaptation is approached consistently across Marin County's numerous cities, special districts, and other jurisdictional boundaries, project staff recommend the use of the BayWAVE scenarios for local vulnerability assessments and adaptation plans. It is important that the approach taken by individual cities, land management agencies, utility districts, and other relevant entities addressing SLR are compatible as adaptation challenges are shared throughout the county, and infrastructure spans administrative boundaries. Preparing and planning in tandem would result in greater benefits stemming from adaptation projects, a coordinated approach to governance, and efficient use of our limited public resources. BayWAVE project staff is available to consult on scenario selection upon request.

The USGS's Coastal Storm Modeling System (CoSMoS) was selected to model the sea level rise countywide. It can be viewed through the Our Coast, Our Future (OCOF) website. The following six scenarios are used to model near-, mid-, and long-term sea level rise, with and without the 100-year storm.

BayWAVE Scenarios *from CoSMoS*		
Near term	10 inches (25 cm), no storm	10 inches with 100 year storm
Mid-term	20 inches (50 cm), no storm	20 inches with 100 year storm
Long-term	60 inches (150 cm), no storm	60 inches with 100 year storm

CoSMoS incorporates ten static SLR at increments, ranging from 0 to 16.4 feet which are coupled with storm events (none, annual, 20-year, and 100-year) to total 40 scenarios. The website includes guidance on choosing scenarios based on several SLR projections by various climate experts. OCOF is publically accessible and interested persons can use the interactive map with address lookup feature to view how specific assets (residents, businesses, etc.) could be impacted by SLR. Uncertainty is shown via the "Flood Potential" feature with maximum/minimum inundation based upon a combination of factors including elevation data, vertical land motion, tidal marsh accretion, and model physics.

BayWAVE's aforementioned scenarios are consistent with state level guidance. In March 2013, the State of California adopted the 2012 National Research Council Report *Sea-Level Rise for the Coasts of California, Oregon, and Washington.* This report identifies projected SLR for 2030/near term as 2-12 inches (4-30 cm), 2050/medium term as 5-24 inches (12-61 cm) and 2100/long term as 17-66 inches (42-167 cm).

For more information on BayWAVE, visit www.MarinSLR.org.