



Sea Level Rise in Santa Barbara, CA

Coastal communities are facing the potential risks of sea level rise under a warming climate. This map presents the severity of impacts that might be caused under different scenarios of sea level rises (1-10 meters). Specifically, I estimated the size of areas that will be flooded, the number of block parcels in those areas, and the associated property loss. Also, I estimated a buffer area within 150 meters around the 10-meter scenario that might be also at risks of being flooded.

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Source: Elevation data from a digital elevation model by Professor Keith Clarke (Department of Geography, UCSB). Parcel data from Tax Assessment Parcels dataset (07 March 2010 version) by Santa Barbara County Enterprise Geographic Information System provided by Zacharias Hunt. ESRI® Data & Maps 2004, ESRI, Redlands, California, USA.

Sea level rise (meters)	Area flooded (hectares)	Parcels flooded (count)	Property loss (\$millions)
1	11	60	51.40
2	31	149	139.07
3	89	375	333.60
4	221	967	873.59
5	316	1866	1506.30
6	372	2871	2116.35
7	422	3597	2582.90
8	467	4396	3032.43
9	504	5188	3425.43
10	543	5926	3831.11