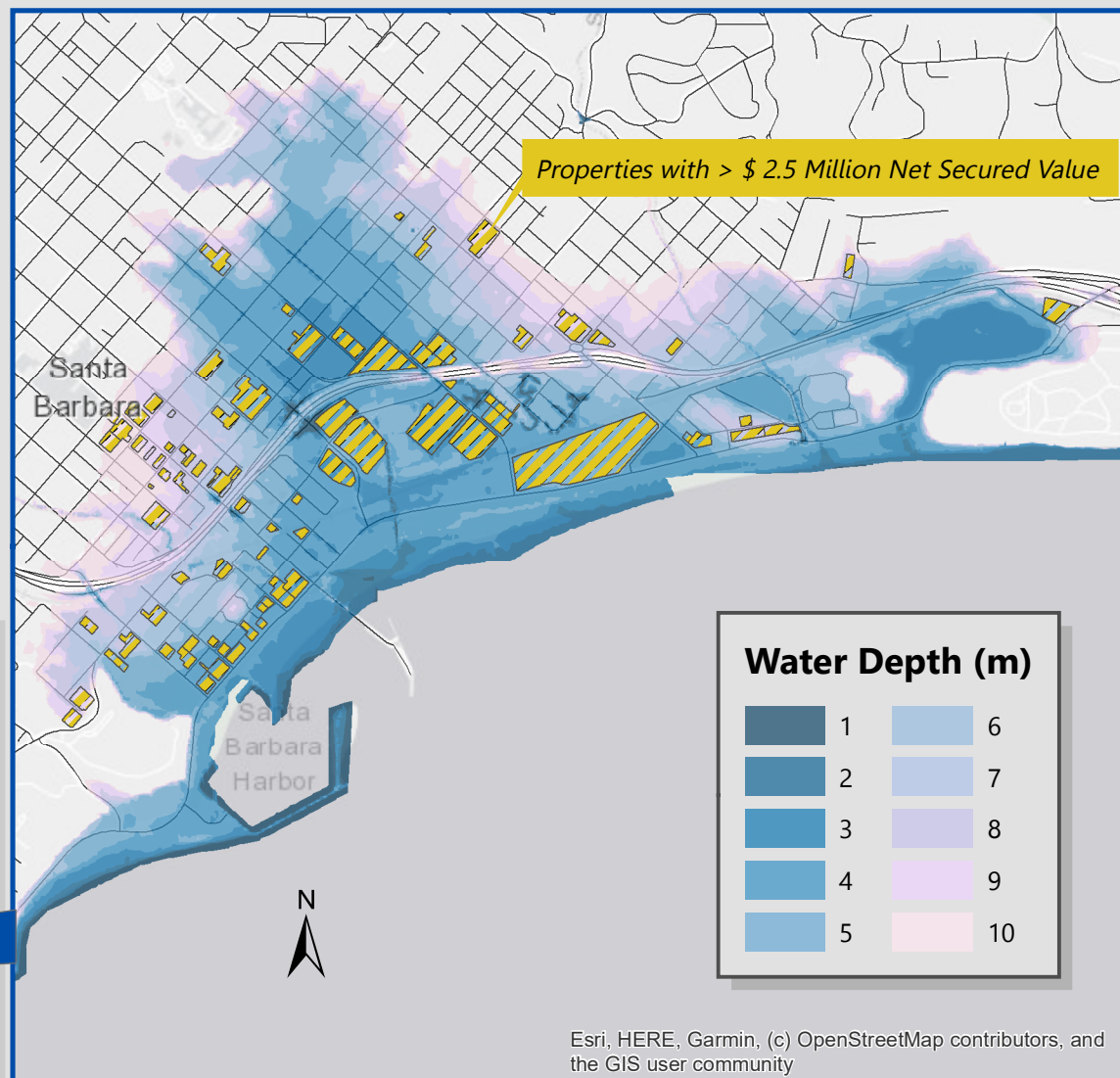


# What will happen when the sea level rises by 10 meters?

## ---- Santa Barbara situation

Santa Barbara, a beautiful city in California, is famous for its fabulous beaches and sea views. However, increasing human activities and industry development has caused an irreversible impact on the Earth. One of the well-known influences is climate change. The change reflects in the global warming effect, which will lead to the snow and ice melt from the polar area and mountains. Santa Barbara is under high risk of the possible sea-level rise. The map on the right side and table below shows how much of the area will Santa Barbara get affected, and the direct property losses.

Designed by: Ruoyu Wang 1/31/2020



Sources: Water depth data is originated from a digital elevation model (DEM) by from Prof. Keith Clarke in the Department of Geography at UCSB. Santa Barbara streets data is obtained from SBGIS. California outline data is downloaded from the California Environmental Information Clearinghouse (CEIC).

The relationship among water depth (unit: meters), impacted area (hectares), and economy loss (\$millions) table

Water Depth (m)	1	2	3	4	5	6	7	8	9	10
Flooded Area (ha <sup>2</sup> )	11	31	89	221	316	372	422	467	504	543
Property Losses (\$millions)	51.4	139.07	333.6	873.59	1506.3	2116.35	2582.9	3032.43	3425.43	3831.11