

Report: Global warming on sea level in Los Angeles will worsen coastal flooding

January 10 2014, by Robert Perkins



Residents of low-lying Southern California communities, such as San Pedro, would be most affected by flooding, according to a USC Dornsife study. Credit: Philip Belfer.

(Phys.org) —The effect of global warming on sea level in Los Angeles will worsen coastal flooding and erosion as major storms produce higher tides, according to a new study by the USC Sea Grant, housed at USC Dornsife's Wrigley Institute for Environmental Studies.

Los Angeles, a metropolis perched on the edge of a coast, can expect to experience a [sea level](#) rise of as much as two feet by 2050 due to climate

change, according to current projections.

In anticipation, a team from USC partnered with the city of Los Angeles to gauge the impact of the rising tides on local communities and infrastructure. The results, according to a report released on Jan. 7, are a mixed bag, but at-risk assets can be protected by proactive planning and early identification of adaptation measures, the report's authors said.

"Some low-lying areas within the city's jurisdiction, such as Venice Beach and some areas of Wilmington and San Pedro, are already vulnerable to flooding," said Phyllis Grifman, lead author of the report and associate director of the USC Sea Grant Program, housed at USC Dornsife's Wrigley Institute for Environmental Studies.

"Identifying where flooding is already observed during periods of storms and high tides, and analyzing other areas where flooding is projected are key elements in beginning effective planning for the future," she said.

Other key findings from the report:

- The city's wastewater management, storm water management and potable water systems are highly vulnerable to [sea level rise](#).
- The Port of Los Angeles and the city's energy infrastructure would be mostly unaffected by the rise in sea level due to a replacement schedule that will allow the city to prepare for future needs to change infrastructure.
- Projected flooding and erosion damage to roads along the coast could impede emergency services.
- Many cultural assets located along the coast, including museums, historic buildings and the Cabrillo Marine Aquarium, could face damage.

Residents of low-lying communities, such as San Pedro and Wilmington,

as well as those with older buildings and high numbers of renters, such as Venice, would be most affected by flooding. In particular, the Abbot Kinney corridor and the fragile Ballona wetlands are at risk. But the region's wide sandy beaches, if maintained, can provide a valuable bulwark against higher waters, according to the report.

Provided by University of Southern California

Citation: Report: Global warming on sea level in Los Angeles will worsen coastal flooding (2014, January 10) retrieved 30 April 2024 from <https://phys.org/news/2014-01-global-sea-los-angeles-worsen.html>

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