

California Ocean Science Trust Report Outlines Path to Stronger Coastal Flood Resilience and Insurance Protections

The new report, authored by Scripps Institution of Oceanography scientists, advances science and transparency in flood risk catastrophe modeling.

SACRAMENTO, CA, UNITED STATES, September 9, 2026 /EINPresswire.com/ -- A [new report released by California Ocean Science Trust \(OST\)](#), in partnership with Scripps Institution of Oceanography and overseen by a Technical Steering Committee, investigated the state of the science of flood risk modeling and mitigation. Developed for the California Department of Insurance (CDI), the report assesses current flood modeling practices and offers eight recommendations to improve how mitigation infrastructure is reflected in catastrophe (CAT) models, ultimately paving a path to incentivize flood risk reduction through insurance outcomes. The report is the most recent effort to come out of OST's ongoing partnership with CDI, first formalized through a Memorandum of Understanding in 2023.

Insurance Commissioner Ricardo Lara [welcomed the report](#), saying, "To truly protect consumers in an age of climate change, insurance regulators must shift from a reactive stance of crisis management to agile, proactive leadership: anticipating disasters like coastal flooding before they strike so communities and markets can weather the storm. 'Strengthening Incentives for Flood Risk Reduction in Catastrophe Modeling and Insurance: Recommendations for California Coastal Counties'—a collaboration of my Department's climate experts, the California Ocean Science Trust, and researchers at UC San Diego—shows this leadership in action."

Flood-related property damage in California is estimated to be \$8 billion per year on average, according to the California Earthquake Authority. As the "super El Niño" strengthens through the winter, the National Oceanic and Atmospheric Administration warns of more frequent, widespread, and deeper flooding in coastal communities due to decades of sea level rise combined with a strong El Niño year. According to scientists at the U.S. Geological Survey, an abnormal year featuring a catastrophic 1-in-1,000 year flood event in California could cause \$725 billion in damage and business disruption, or over \$1 trillion in present-day dollars.

"In California's coastal counties, flooding is driven by combinations of intense rainfall, storm tides, and ocean waves, and flood risks are increasing as sea levels rise, watersheds burn, and the warmer atmosphere produces more intense rainfall. Investments that make California more resilient to flooding are needed now, and if planned well, these can bring co-benefits such as

stormwater capture," said Dr. Brett Sanders, Chancellor's Professor at UC Irvine in Civil and Environmental Engineering, Urban Planning and Public Policy. Dr. Sanders, along with Dr. Michael Beck, Director of the UC Santa Cruz Center for Coastal Climate Resilience, and Tim Farrell, F.C.A.S., at the National Association of Insurance Commissioners, served on a Technical Steering Committee that provided oversight on the report's direction.

"Insurance could help California prepare for increasing flood risk by rewarding flood mitigation efforts with better pricing and availability," said Dr. Tom Corringham, research economist at Scripps Institution of Oceanography, UC San Diego, and a primary author of the report. "We offer recommendations for filling critical data and policy gaps to link mitigation efforts with financial incentives, helping insurers and California's communities realize the economic benefits of investing in resilience."

The report highlights the value of greater information exchange—including increasing baseline measurement, improving model inputs, and increasing transparency in how risk reduction is reflected in insurance outcomes. From quantifying statewide flood insurance protection gaps to developing comprehensive data sets of California flood-risk and defense structures to creating a California Public Flood Risk Model, the authors outlined key steps to make flood risk mitigation visible in the data, credible in the models, and transparent in the markets.

With the foundation this report builds, California can better prioritize mitigation across public investment, private risk-reduction decisions, insurance pricing, underwriting, and oversight. Taking these actions would position California as a national and global model for understanding flood risk.

"Science must drive sound policy and decision-making along our coastlines," said Dr. Liz Whiteman, Executive Director of OST. "This report gives state leaders actionable guidance from the flood science community to ensure insurance tools accurately capture the real-world value of both nature-based and traditional flood defenses."

About California Ocean Science Trust

California Ocean Science Trust strengthens the bridge between scientific research and sound ocean management. Created by California state legislation, OST supports and brings world-class science and innovation together with state and federal policymakers to accelerate progress toward a healthy and resilient coast and ocean.

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