

Collaborative Partnerships to Build Coastal Resilience



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Prevention First Symposium
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80+ affiliated researchers



center for
**Climate
Change
Impacts *and*
Adaptation**



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REGIONAL SEA LEVEL RISE WORK GROUP

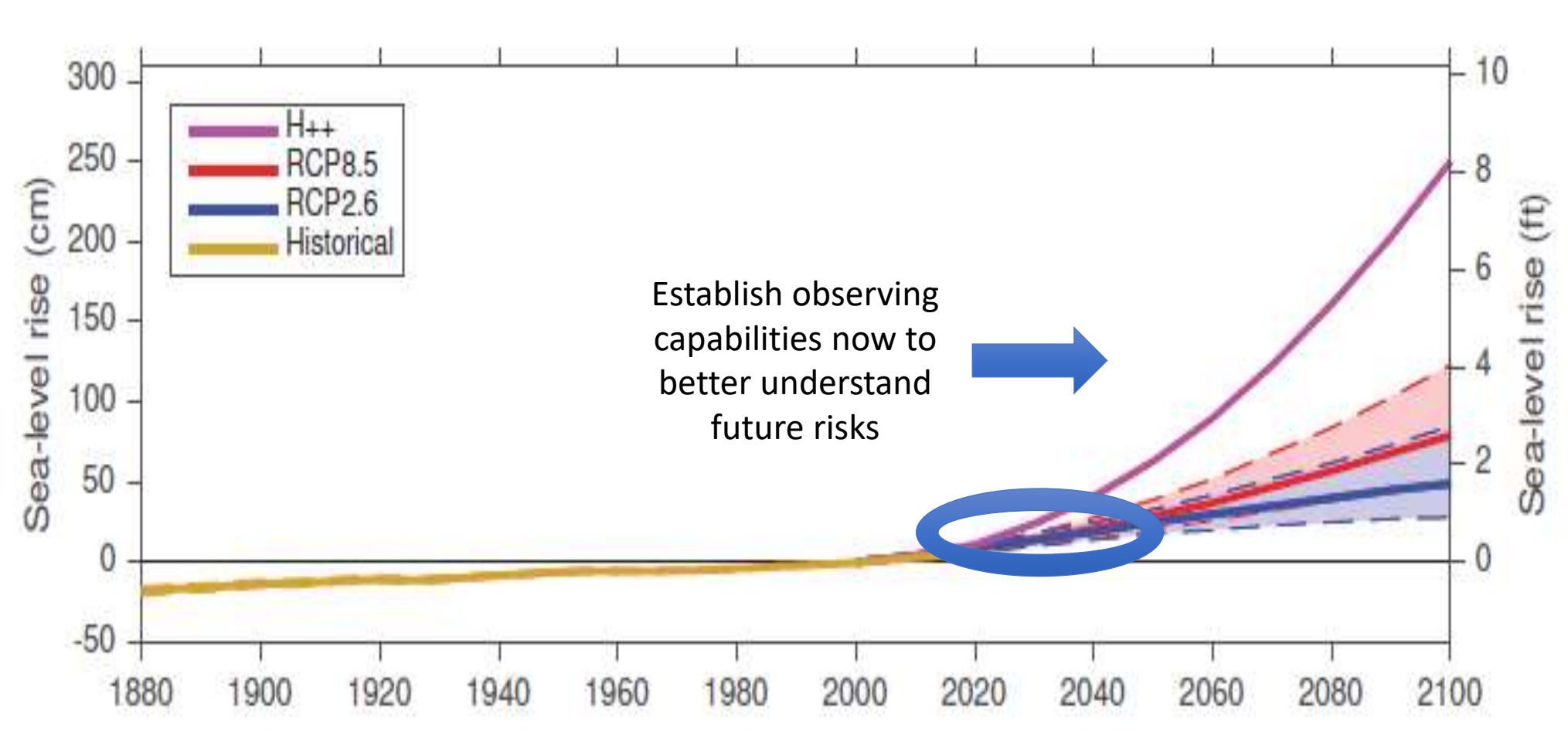
- Local Cities
- Port of San Diego
- San Diego Airport
- US Navy
- State Agencies
- SANDAG
- SDG&E
- Scripps Institution of Oceanography



REGIONAL APPROACH

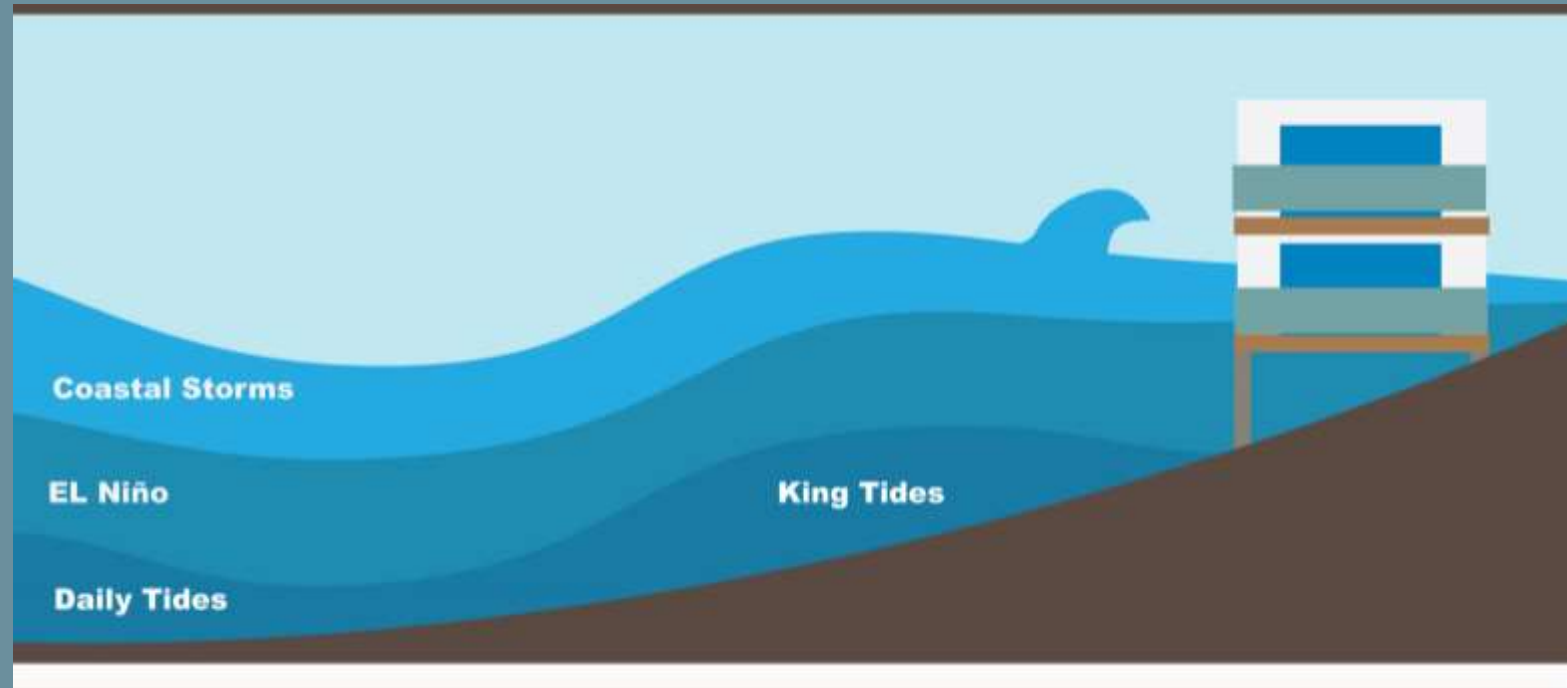


SEA-LEVEL RISE PROJECTIONS



COMPOUNDED EVENTS AND A WINDOW INTO THE FUTURE?

- El Ninos:
 - Warmer oceans and air
 - More extreme water level events
- King Tides
- Larger coastal storms
 - waves
 - flooding



RESILIENT FUTURE INITIATIVE

IMPERIAL BEACH FLOOD WARNING SYSTEM

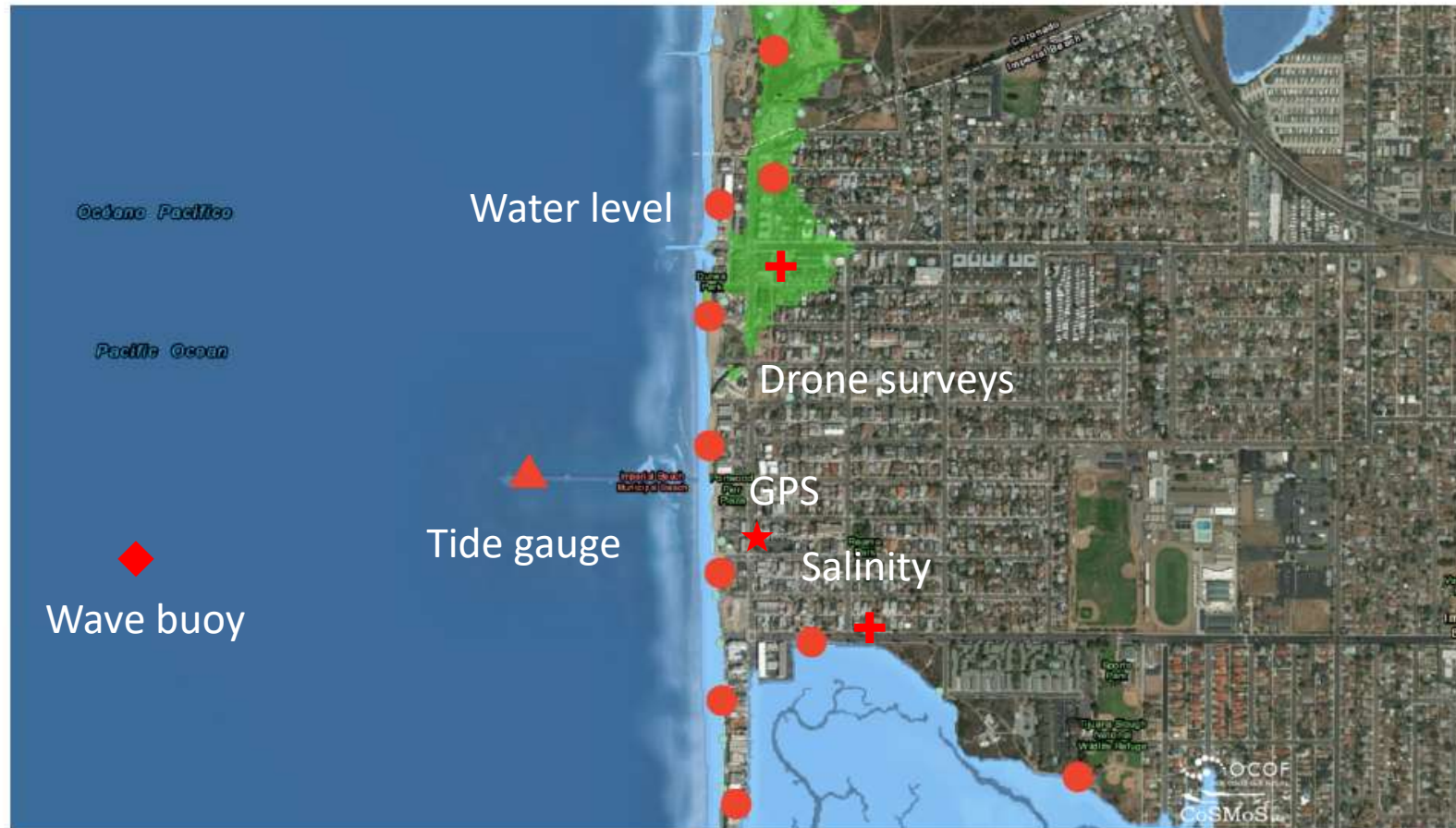


Figure 1. Map of flooding risk for a 20-year storm from the CoSMoS 3.0 website (https://walrus.wr.usgs.gov/coastal_processes/cosmos/socal3.0/index.html). Green denotes flood-prone low-lying areas, blue denotes flood hazard zones. Red dots indicate example sites for water level sensor deployments, the triangle shows where a tide gauge could be deployed.

RESILIENT FUTURE INITIATIVE

IMPERIAL BEACH FLOOD WARNING SYSTEM



- Inundation observing system for IB

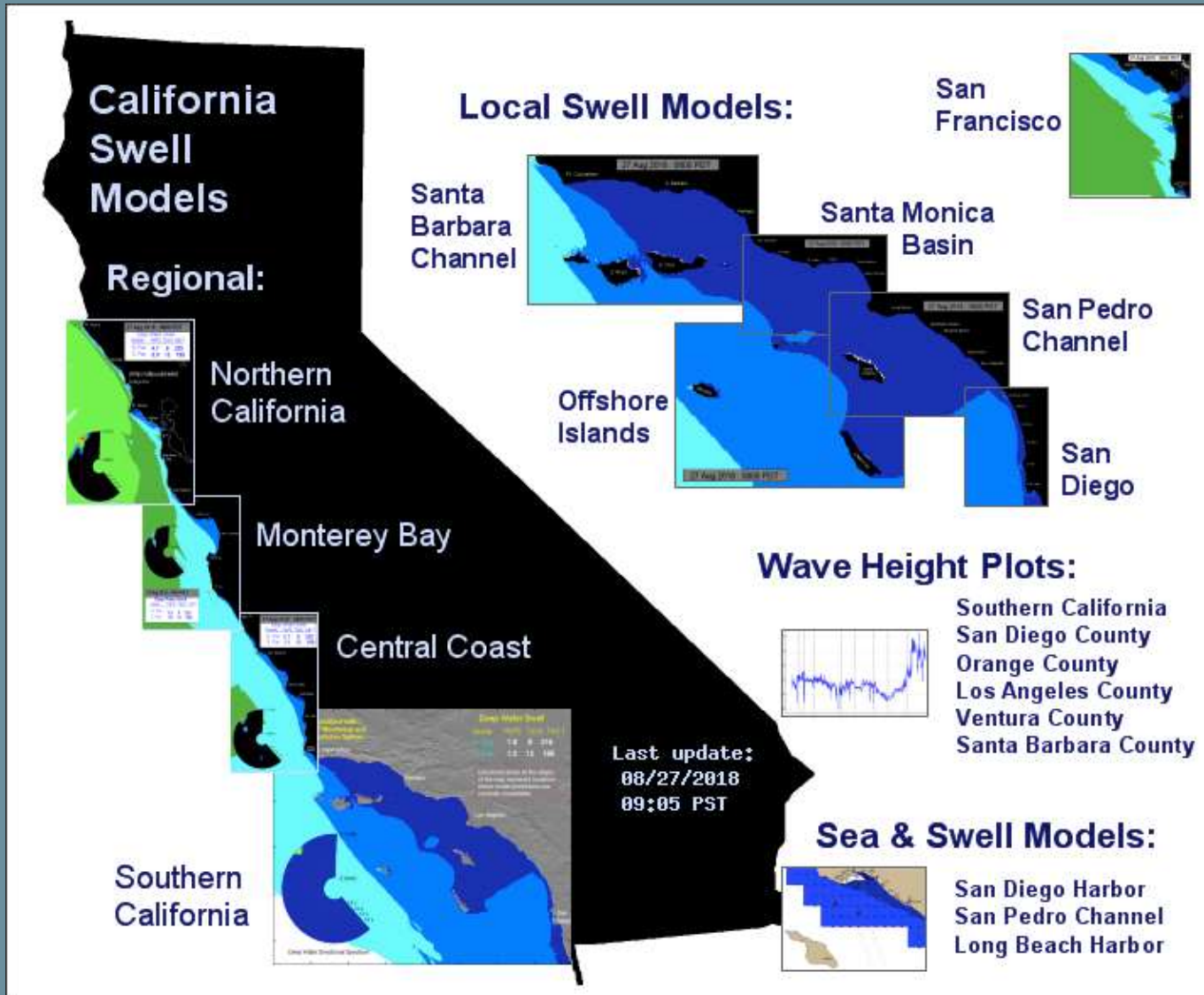
- Flood model forecasts & alerts

- Probability of flood risk as a function of sea-level rise

- Long-term integration into IB climate and flood mitigation strategies

RESILIENT FUTURE INITIATIVE

IMPERIAL BEACH FLOOD WARNING SYSTEM

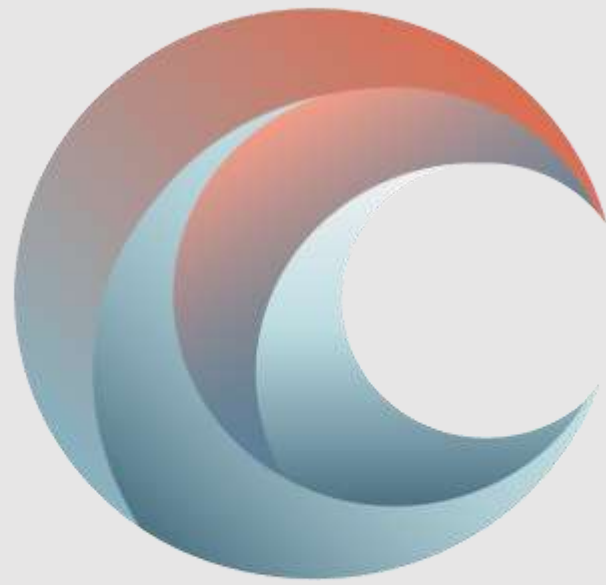


Flood forecasts with wave and circulation models

Forecasts initialized and verified with real-time observations

Same models used for downscaling flood risk in climate projections





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