Southern California beaches are a major economic driver for the region, our first line of defense against climate-related coastal impacts and an important element of our culture of the “endless summer.” We have put together a team of expert coastal scientists to help project future storms under various sea level rise scenarios and to predict the potential impact of those storms on our coastline.

**Coastal Storms Modeling System (CoSMoS)**
- Downscaled climate models force atmospheric and wind conditions
- Future storms projections
- Fluvial inputs

Led by Dr. Patrick Barnard & Dr. Li Erickson

**Backshore Characterization & SLR Modeling**
- Coastal geomorphology/backshore characterization
- Sea level rise modeling
- Sea level rise vulnerability assessment

Led by Dr. David Revell & Dr. Bob Battalio

**Shoreline Change Modeling**
- Historical shoreline position data
- Short-term wave-driven modeling
- Long-term sea level rise driven shoreline change

Led by Dr. Reinhard Flick & Dr. Adam Young

Extreme high tides and strong winter storms can have dramatic impacts on our coastline. Using past storms and global climate models to drive model development, CoSMoS projects future storms in the context of multiple sea level rise scenarios, allowing communities to plan appropriately.

Characterization of the backshore is an essential component in projecting shoreline change, particularly in a highly urbanized coastline such as L.A. This information, along with the storms and sea level rise modeling, will drive the development of a preliminary regional vulnerability assessment that will be available to all communities.

Throughout the years, our shoreline has been modified by both natural processes and human processes. Above are images of Pacific Palisades in 1972 (left) compared to 2008 (right). Effective coastal impacts planning depends on sound shoreline change modeling and information.