

Climate Change Impacts on Ocean and Coastal Resources

Sea level rise projections in California are anticipated to pose significant risks to the state's coastal communities and infrastructure. According to an Ocean Protection Council funded study, 55 inches of sea level rise, combined with a 100-year flood event will put 480,000 people at risk and flood nearly \$100 billion in property.¹

In addition to sea level rise, California's coastal and ocean resources are expected to experience dramatic changes due to shifts in ocean chemistry (e.g., temperature and pH), more severe atmospheric events (e.g., El Niño); and variation in ecosystem processes (e.g., nutrient upwelling).



The OPC is uniquely situated to coordinate state agency actions to reduce impacts from sea level rise and other climate change related phenomena to California's coastal and ocean resources. The OPC's accomplishments include partnering with other state agencies to develop the ocean and coastal resources sector of the 2009 California Climate Adaptation Strategy, and leading the California Climate Action Team's Coastal and Ocean Working Group (CO-CAT), which has prioritized and created implementation plans for state coastal and ocean adaptation and mitigation actions.



Science Integration

The OPC assembled a Sea Level Rise Task Force consisting of a dozen state agencies, which developed questions for the OPC's Science Advisory Team to establish recommendations for interim sea level rise projections to use prior to the release of a report by the National Academies of Science in 2012.



photo: Pacific Institute





photo: BioPower Systems



photo: Pelamis Wave Power

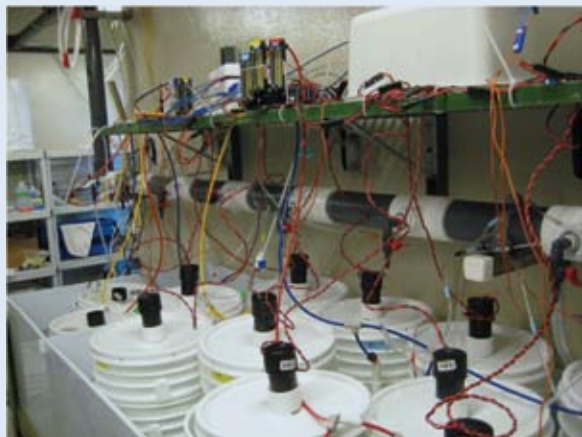


photo: Ocean Power Technologies, Inc.



Policy

On June 14, 2007, the OPC passed a resolution that revised guidelines for climate change impact research, encouraged coastal communities to amend their local coastal plans (LCPs) to address climate change, examined environmental impacts of ocean energy technologies, and opposed federal preemption of California's greenhouse gas law.



Ocean Acidification Lab—UC Santa Barbara

Funding

The OPC has provided funding for climate change research related to sea level rise, coastal erosion, ocean acidification, impacts on salmon, as well as tidal wetlands. The OPC is developing additional funding for priority coastal and ocean climate change research and planning projects, including improving tidal gauge monitoring to support local sea level rise measurements.



photo: Gretchen Hofmann

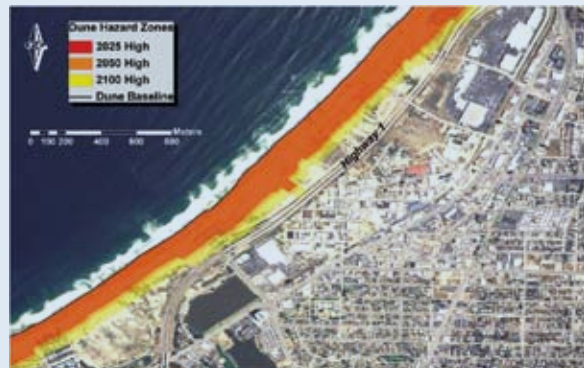


photo: PWA



photo: Thomas Dunklin

¹Matthew Heberger, Heather Cooley, Pablo Herrera, Peter H. Gleick, and Eli Moore of the Pacific Institute, *The Impacts of Sea Level Rise on the California Coast*, August 2009, a Paper from the California Climate Change Center.