

Preparing for Climate Change: Insights from California's Fourth Climate Change Assessment

VerdeXchange 2019
Los Angeles, CA

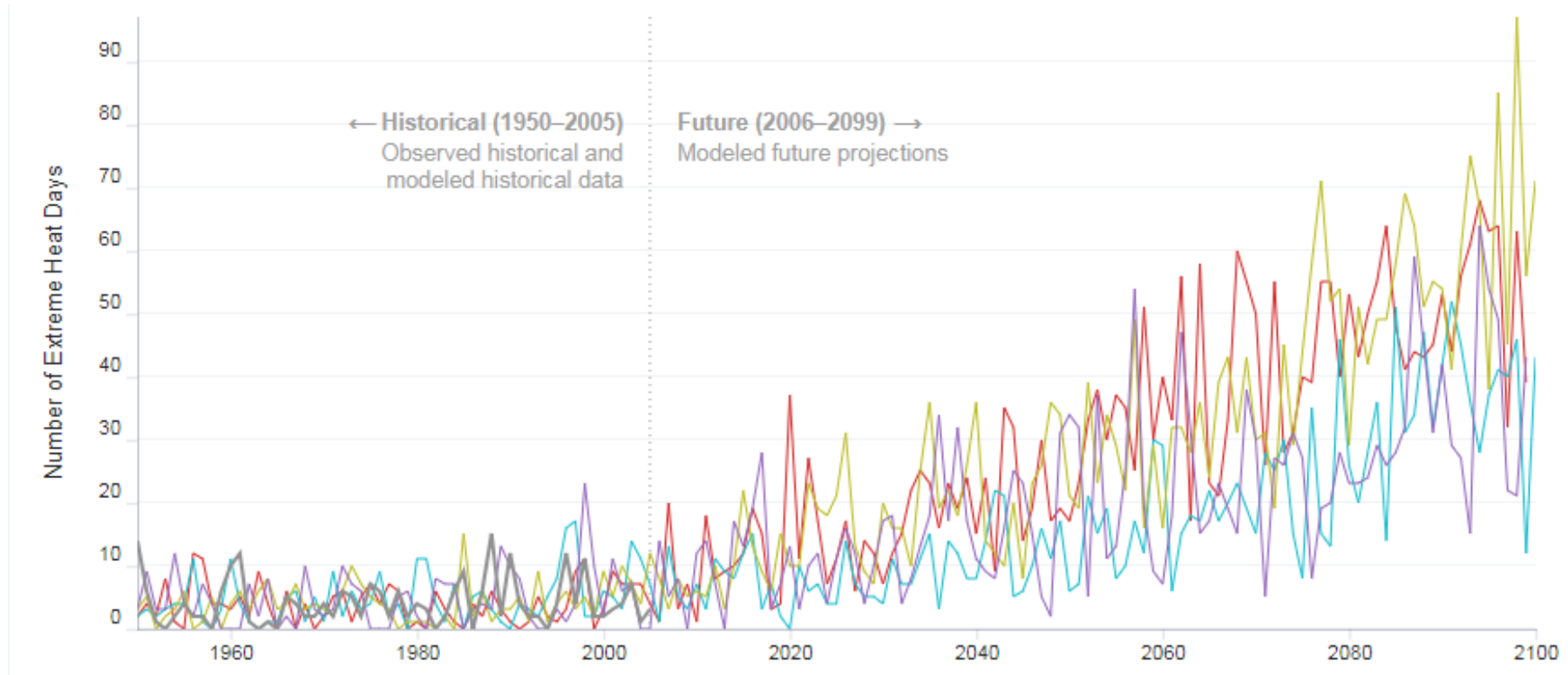


Robert B. Weisenmiller
January 28, 2019
California Energy Commission



California Climate Change Impacts: Greater Variability and Higher Extremes

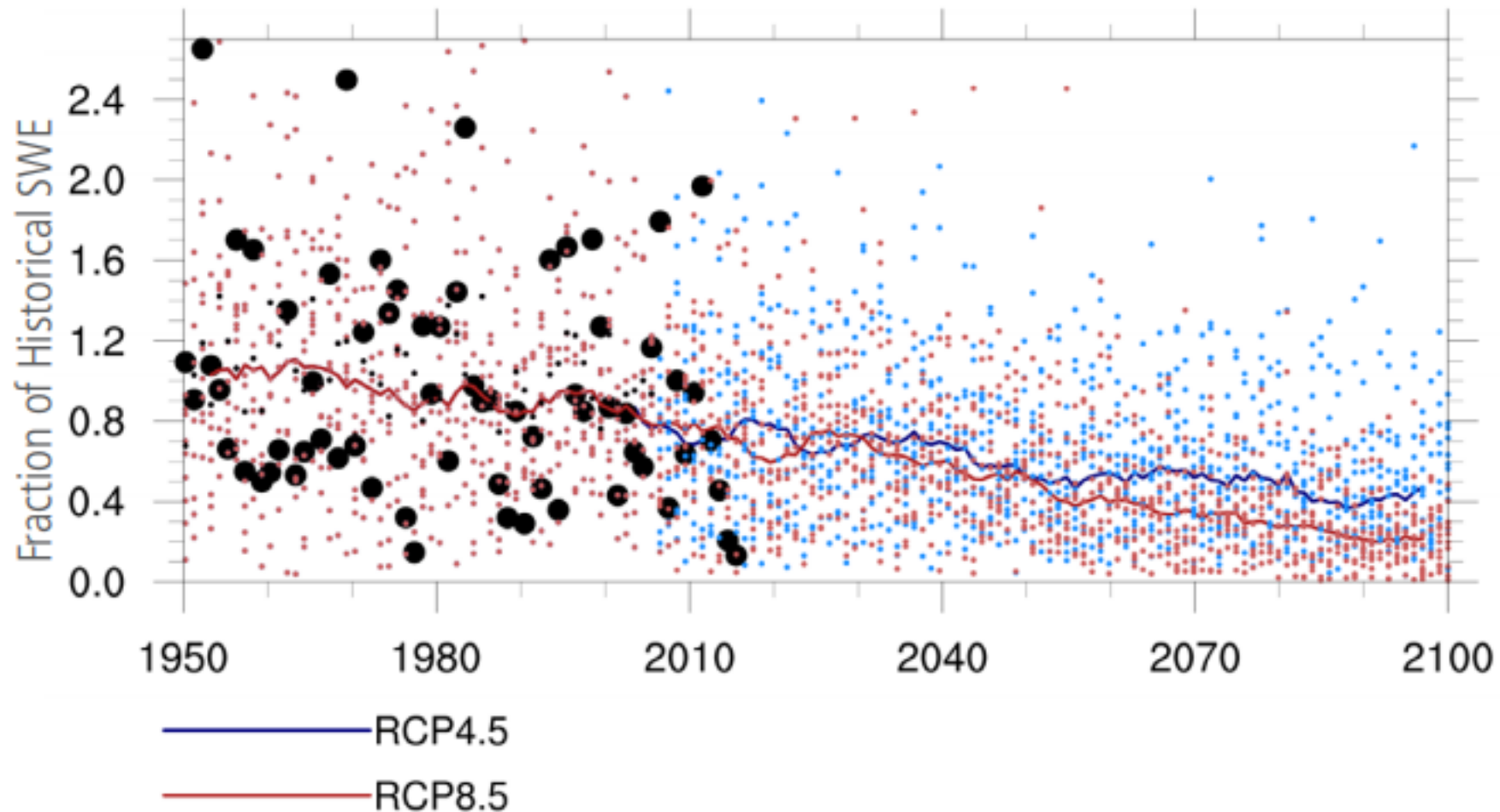
Days per year when maximum temperature in Sacramento is projected to be above 103.8 °F under the RCP 8.5 scenario (emissions rise strongly through 2050 and plateau around 2100).



Source: Cal-Adapt. Data: LOCA Downscaled Climate Projections (Scripps Institution of Oceanography), Gridded Historical Observed Meteorological and Hydrological Data (University of Colorado, Boulder).



California Climate Change Impacts: Average Water Supply from Snowpack is Declining



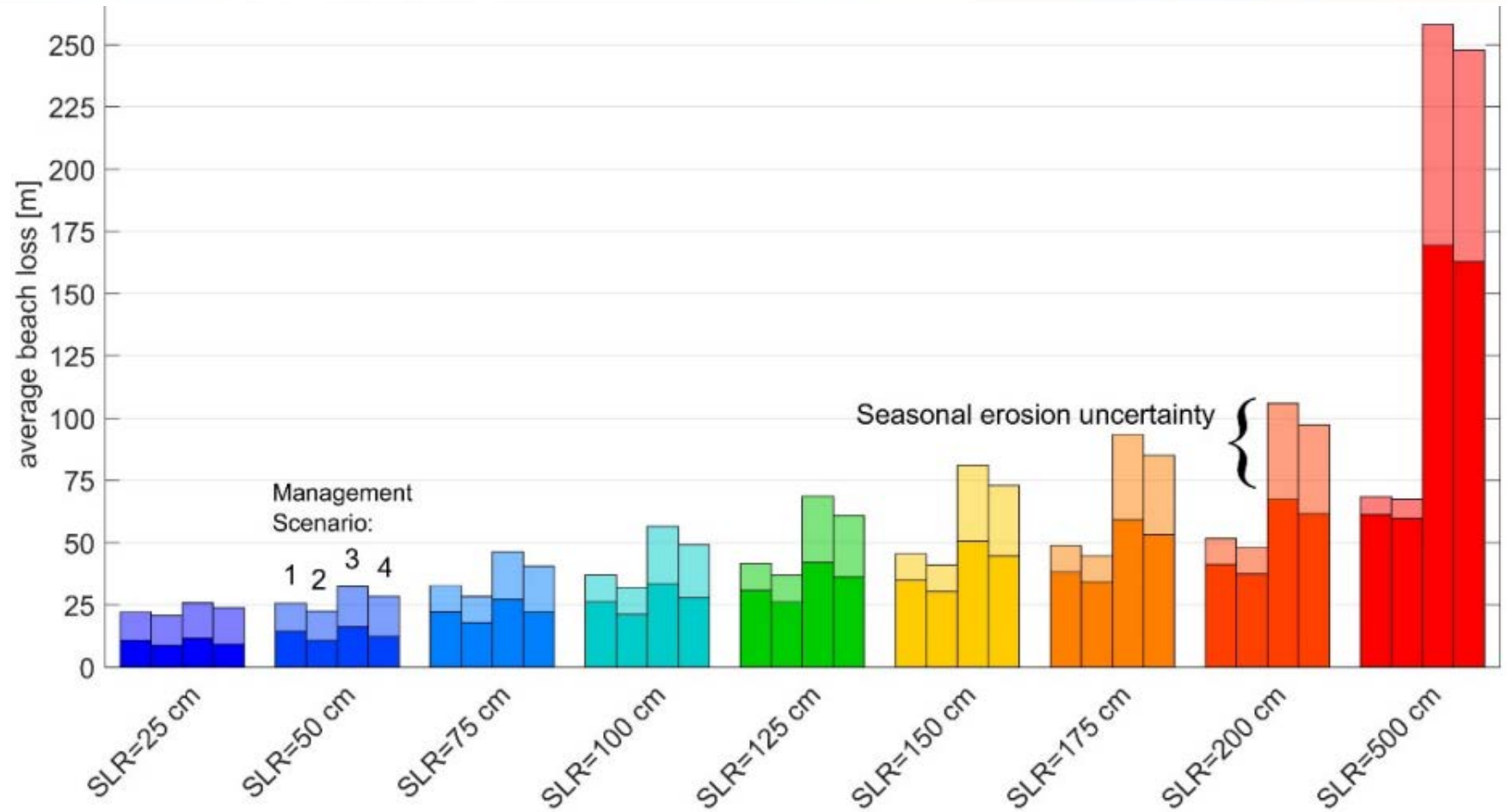
Source: Pierce, D. W., J. F. Kalansky, and D. R. Cayan, (Scripps Institution of Oceanography). 2018. Climate, Drought, and Sea Level Rise Scenarios for the Fourth California Climate Assessment. California's Fourth Climate Change Assessment, California Energy Commission. Publication Number: CNRA-CEC-2018-006.



California Climate Change Impacts: Average Southern California Beach Loss by 2100

Beach management scenarios:

- (1) Hold-the-line and no nourishment
- (2) Hold-the-line and continued nourishment
- (3) No hold-the-line and no continued nourishment
- (4) No hold-the-line and continued nourishment

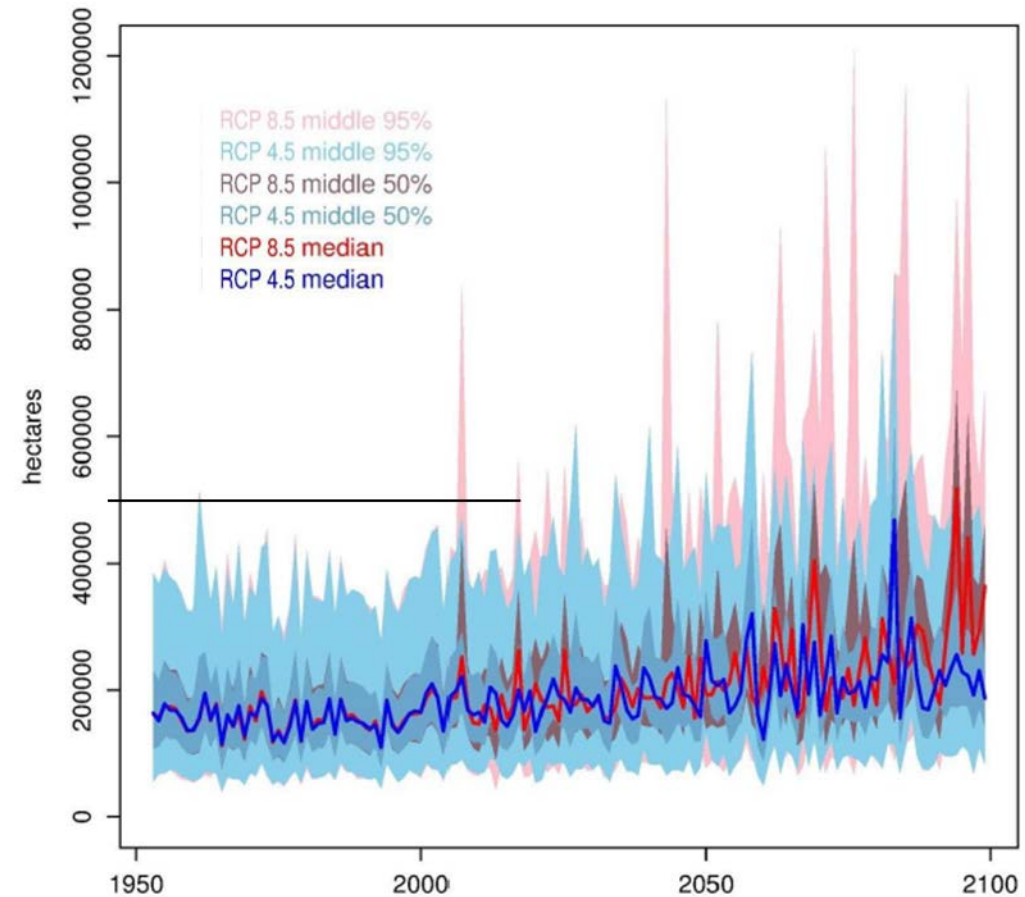


Source: Erikson, Li, H., Patrick L. Barnard, Andrea O'Neill, Patrick Limber, Sean Vitousek, Juliette Finzi Hart, Maya Hayden, Jeanne Jones, Nathan Wood, Michael Fitzgibbon, Amy Foxgrover, Jessica Lovering. (U.S. Geological Survey and Point Blue Conservation Science). 2018. Assessing and Communicating the Impacts of Climate Change on the Southern California Coast. California's Fourth Climate Change Assessment, California Natural Resources Agency. Publication number: CCCA4-CNRA-2018-013.



California Climate Change Impacts: Extreme Wildfires Expected to Increase

- In 2017, California wildfires burned about 500,000 hectares (horizontal black line)
- RCP4.5 (blue) vs 8.5 (brown, red, pink): median, 50 percentile, and 95 percentile



Source: Westerling (2018). *Wildfire Simulations for the Fourth California Climate Assessment: Projecting Changes in Extreme Wildfire Events with a Warming Climate*



CALIFORNIA'S FOURTH CLIMATE CHANGE ASSESSMENT

<http://climateassessment.ca.gov/>